OCCUPATIONAL SURVEY REPORT

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ELECTRONIC PRINCIPLES OCCUPATIONAL SURVEY REPORT,

TELECOMMUNICATIONS SYSTEMS CONTROL
CAREER LADDER

AFSC 307X0

AFPT-90-307-222

30 JUNE 1977

OCCUPATIONAL SURVEY BRANCH
USAF OCCUPATIONAL MEASUREMENT CENTER
LACKLAND AFB TEXAS 78236

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PREFACE

This report presents a summary of the results of a detailed Air Force Electronic Principles Survey of the Telecommunications Systems Control Specialty, AFSC 307X0.
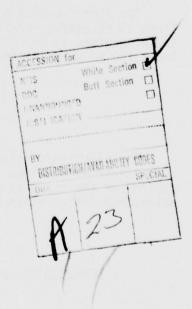
The Electronic Principles Inventory (EPI) was developed by Major Thomas J. O'Connor and Mr. Hendrick W. Ruck and the survey data were analyzed by Captain Jerry M. Barucky. All are members of the Occupational Survey Branch, USAF Occupational Measurement Center, Lackland AFB, Texas.

Computer programs for analyzing the data were designed by Dr. Raymond E. Christal, Occupational and Manpower Research Division, Air Force Human Resources Laboratory (AFHRL), and were written by the Project Analysis and Programming Branch, Computational Sciences Division, AFHRL.

Distribution of this report is made upon request to the USAF Occupational Measurement Center, attention of the Chief, Occupational Survey Branch (OMY), Lackland AFB, Texas 78236.

This report has been reviewed and is approved.

JAMES A. TURNER, JR., Colonel, USAF   WALTER E. DRISKILL, Ph.D.
Commander   Chief, Occupational Survey Branch
USAF Occupational Measurement Center   USAF Occupational Measurement Center

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ELECTRONIC PRINCIPLES OCCUPATIONAL SURVEY REPORT
TELECOMMUNICATIONS SYSTEMS CONTROL CAREER LADDER
AFSC 307X0

INTRODUCTION

This report summarizes the results of the administration of the
Electronic Principles Inventory to airmen assigned to Telecommunications
Systems Control Specialty (AFSC 307X0). The data for this report were
collected during the period November 1976 through March 1977.

This report describes: (1) development and administration of the
survey instrument; and (2) electronic principles used by DAFSC 5-skill
level personnel both CONUS and overseas and assigned to selected major
commands.

DEVELOPMENT OF THE ELECTRONIC PRINCIPLES INVENTORY (EPI)

The EPI was developed by personnel from the Occupational Survey Branch
who were well qualified in theoretical physics and electronics, as well as
in task analysis and survey development. Over 300 maintenance personnel
from SAC, TAC, ADC, MAC, and AFCS participated in the development of the
inventory. Representing the five ATC training centers, electronics
experts who averaged 12 years of maintenance experience and four years
of electronic principles instruction experience spent several weeks
refining the EPI. In addition, personnel at the Electrical Engineering
Department of the USAF Academy and the Air Force Human Resources Labora-
tory were consulted during the development of the inventory.

The final version of the EPI used in this survey contained 1,257
items in 62 subject matter areas covering all electronic principles
training given at the five ATC technical training centers. Table 1
lists the 62 subject areas.

ADMINISTRATION

The Electronic Principles Inventory was administered by mail to AFSC
30750 airmen worldwide. Responses from 498 individuals represented 35
percent of the total of all AFSC 30750 personnel. Table 2 shows the
percentage distribution by major command of the survey incumbents.

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TABLE 1

EPI SUBJECT AREAS

SEQUENCE OF SUBJECT AREAS	SUBJECT AREA TITLE	BEGINNING ITEM NUMBER	GPSUM PAGE NUMBER
1	MATHEMATICS	A1	4
2	DIRECT CURRENT AND VOLTAGE	A15	4
3	RESISTANCE	A24	4
4	MULTIMETER USES	B52	5
5	ALTERNATING CURRENT	B61	6
6	INDUCTORS AND INDUCTIVE REACTANCE	B67	6
7	CAPACITORS AND CAPACITIVE REACTANCE	C92	7
8	TRANSFORMERS	C128	8
9	MAGNETISM	C171	9
10	RCL CIRCUITS	D185	10
11	SERIES AND PARALLEL RESONANCE (TIME CONSTANTS)	D229	12
12	FILTERS	D239	12
13	COUPLING	E261	13
14	SOLDERING	E273	13
15	RELAYS	E294	14
16	MICROPHONES	F314	14
17	SPEAKERS	F327	15
18	OSCILLOSCOPES	F342	15
19	SEMICONDUCTOR DIODES	G354	15
20	TRANSISTORS	G404	17
21	TRANSISTOR AMPLIFIERS	G428	18
22	SOLID-STATE SPECIAL PURPOSE DEVICES	H477	21
23	POWER SUPPLIES	H483	21
24	OSCILLATORS	H512	21
25	MULTIVIBRATORS	I539	22
26	LIMITERS AND CLAMPERS	I555	23
27	ELECTRON TUBES	I565	23
28	ELECTRON TUBE AMPLIFIERS AND CIRCUITS	J609	24
29	SPECIAL PURPOSE ELECTRON TUBES	J616	25
30	HETERODYNING, MODULATION, AND DEMODULATION	J632	25
31	AM SYSTEMS	K638	25
32	FM SYSTEMS	K666	26

TABLE 1 (CONTINUED)

EPI SUBJECT AREAS

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TABLE 2

COMMAND REPRESENTATION OF SURVEY SAMPLE

| | 30750 | |
COMMAND	PERCENT ASSIGNED	PERCENT OF SAMPLE
AFCS	85	69
All OTHERS	15	31
TOTAL	100	100

Total Assigned - 1421
Total Sampled - 498
Percent Sampled - 35

PRESENTATON OF RESULTS

Personnel responded "yes" or "no" to the 1,257 electronic principles questions as related to their present job. A Group Summary (GPSUM) computer printout is provided in the Appendix portion of this report. Page 2 of the GPSUM lists the five selected groups identified for this report. Pages 4-46 show the percentage of the incumbents responding to the EPI items. The computer program results display the percent members answering "yes" to the subject area questions. The reader can locate a specific subject area by referring to the Appendix page number as listed in Table 1. For example, the Transformers area results are given on pages 8-9 of the GPSUM. The percentage of survey respondents indicating use of specific electronic principles ranged from high in areas such as Meter Movements (p. 31), Alternating Current (p. 6), and Oscilloscopes (p. 15) to low in areas such as Infrared (pp. 43-44), Lasers (pp. 44-45), and Display Tubes (p. 45). Additional AFSC 307X0 data can be obtained upon request to the Chief, Occupational Survey Branch (OMY).

APPENDIX

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AF HUMAN RESOURCES LABORATORY
AIR FORCE SYSTEMS COMMAND

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PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TABULATION OF ELECTRONIC PRINCIPLES UTILIZATION DATA FOR SELECTED GROUPS
IN THE 307X0 CAREER FIELD.

REPORTS ON THE FOLLOWING GROUPS WERE REQUESTED

GROUP IDENTITY = SPLOO1 ALL AIRMEN DAFSC 30750   CONTAINING 498 MEMBERS.
GROUP IDENTITY = SPLOO2 ALL AIRMEN DAFSC 30750 STATIONED IN CONUS   CONTAINING 288 MEMBERS.
GROUP IDENTITY = SPLOO3 ALL AIRMEN DAFSC 30750 STATIONED OVERSEAS   CONTAINING 208 MEMBERS.
GROUP IDENTITY = SPLOO4 ALL AIRMEN DAFSC 30750 ASSIGNED TO AFCS   CONTAINING 344 MEMBERS.
GROUP IDENTITY = SPLOO5 ALL AMN DAFSC 30750 ASGN TO ALL OTHER COMMANDS CONTAINING 148 MEMBERS.

PCT B-S RESPONDING 'YES' BY SELECTED GRPS

DUTY GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DUTY	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
MATHEMATICS, DIRECT CURRENT, VOLTAGE, AND RESISTANCE	90	87	93	89	91
MATHEMATICAL USES, ALTERNATING	86	84	86	85	89
CAPACITORS, INDUCTORS, AND INDUCTIVE CAPACITIES, CAPACITIVE REACTANCE, TRANSFORMERS,	35	33	39	31	46
MAGNETISM	24	22	26	22	29
RCL CIRCUITS, SERIES AND PARALLEL RESONANCE (TIME CONSTANTS), AND FILTERS	41	41	42	43	36
COUPLING, SOLDERING, AND RELAYS	86	89	82	85	89
MICROPHONES, SPEAKERS, AND OSCILLOSCOPES	15	14	16	13	18
SEMICONDUCTOR DIODES, TRANSISTORS, AND TRANSISTOR AMPLIFIERS	64	61	67	61	72
SOLID STATE SPECIAL PURPOSE DEVICES, POWER SUPPLIES, AND OSCILLATORS	8	9	9	4	16
MULTIVIBRATORS, LIMITERS, CLAMPERS, AND ELECTRON TUBES ELECTRON TUBE AMPLIFIERS AND CIRCUITS, SPECIAL PURPOSE ELECTRON TUBES, HETERODYNING, MODULATION,	44	44	43	40	54
FAX SYSTEMS, FM SYSTEMS, AND NUMBERING SYSTEMS	38	36	40	36	44
LOGIC FUNCTIONS, BOOLEAN EQUATIONS, AND COUNTERS	23	25	21	23	26
TIMING CIRCUITS, USE OF SIGNAL GENERATORS, MOTORS, AND GENERATORS	69	66	73	68	71
METER MOVEMENTS, SATURABLE REACTORS, MAGNETIC AMPLIFIERS, AND WAVESHAPING CIRCUITS	78	76	79	76	82
SINGLE SIDEBAND SYSTEMS, PULSE MODULATION SYSTEMS, AND ANTENNAS	26	31	19	23	33
TRANSMISSION LINES, WAVEGUIDES AND CAVITY RESONATORS, AND MICROWAVE AMPLIFIERS AND OSCILLATORS	36	38	33	33	42
REGISTERS, STORAGE DEVICES, AND DIGITAL TO ANALOG CONVERTERS	30	34	25	26	42
MULTIVIBRATORS, SCHMITT TRIGGERS, AND GATE FABRICATION	4	5	2	2	9
INPUT OUTPUT DEVICES, PHOTO SENSITIVE DEVICES, AND SYNCHRONOUS VIBRATIONS	21	24	17	17	30
INFRARED, LASERS, AND DISPLAY TUBES	1	2	0	0	3
POWER RATING, DB AND POWER RATIOS	78	76	81	76	84

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
A	1 41-01 IN YOUR PRESENT JOB, DO YOU USE INSTRUMENTS, SUCH AS METERS OR OSCILLOSCOPES, IN WHICH IT IS NECESSARY TO	65	62	68	63	70	
A	2 41-02 DO YOU USE PUBLICATIONS, SUCH AS A TECHNICAL ORDERS OR MAINTENANCE MANUALS, IN WHICH IT IS NECESSARY FOR YOU	29	29	29	28	34	MATHEMATICS
A	3 41-03 DO YOU REARRANGE AND SOLVE FORMULAS OR EQUATIONS.	34	28	42	35	34	
A	4 41-04 DO YOU CALCULATE THE SQUARE ROOT OF A QUANTITY.	10	10	10	8	14	
A	5 41-05 DO YOU SOLVE FOR UNKNOWN QUANTITIES.	24	19	32	25	29	
A	6 41-06 DO YOU CONVERT NUMBERS TO LOGARITHMS.	29	22	38	31	26	
A	7 41-07 DO YOU USE LOGARITHM TABLES IN ANY TYPE OF CALCULATIONS.	33	25	43	35	29	
A	8 41-08 DO YOU SOLVE QUADRATIC EQUATIONS.	5	4	5	5	4	
A	9 41-09 DO YOU USE THE NATURAL SYSTEM OF LOGARITHMS.	14	10	20	15	12	
A	10 41-10 DO YOU PERFORM CALCULATIONS ON VECTOR QUANTITIES.	5	7	3	3	10	
A	11 41-11 DO YOU WORK WITH TRIGONOMETRIC FUNCTIONS SUCH AS SINE, COSINE, OR TANGENT.	6	6	6	6	6	
A	12 41-12 DO YOU DETERMINE AREAS OF PLANE FIGURES.	2	3	1	1	4	
A	13 41-13 DO YOU SOLVE OR USE SIMULTANEOUS EQUATIONS.	3	2	2	2	4	
A	14 41-14 DO YOU SOLVE OR USE PROPORTIONS.	11	13	9	9	16	
A	15 42-01 DO YOU USE THE TERM VOLTAGE OR VOLT (V).	82	79	85	81	83	
A	16 42-02 DO YOU USE THE TERM ELECTROMOTIVE FORCE (EMF).	10	11	10	8	16	DIRECT CURRENT AND VOLTAGE
A	17 42-03 DO YOU USE THE TERM OHM.	73	69	80	74	73	
A	18 42-04 DO YOU USE THE TERM ION.	7	9	5	4	14	
A	19 42-05 DO YOU USE THE TERM DYNE.	3	4	3	2	7	
A	20 42-06 DO YOU USE THE TERM AMPERE.	66	62	71	65	68	
A	21 42-07 DO YOU USE THE TERM NEUTRON.	5	7	3	3	9	
A	22 42-08 DO YOU USE THE TERM COULOMB.	5	6	4	3	9	
A	23 42-09 DO YOU USE THE TERM PROTON.	5	6	3	2	9	
A	24 43-01 DO YOU WORK WITH RESISTORS IN YOUR PRESENT JOB.	28	22	29	23	30	
A	25 43-02 DO YOU INSPECT RESISTORS.	6	6	6	5	9	
A	26 43-03 DO YOU CLEAN RESISTORS.	2	3	1	1	5	
A	27 43-04 DO YOU ADJUST RESISTORS.	9	8	11	9	10	RESISTANCE
A	28 43-05 DO YOU CHECK OHMIC VALUE OR RESISTORS.	16	12	22	15	20	
A	29 43-06 DO YOU REMOVE OR REPLACE RESISTORS.	5	5	4	3	8	
A	30 43-07 DO YOU USE OR REFER TO TEMPERATURE COEFFICIENTS FOR RESISTORS ON ANY TASKS YOU PERFORM.	2	2	1	1	4	
	31 43-08 DO YOU USE OR REFER TO RESISTOR SYMBOLS SUCH AS FIXED RESISTOR SYMBOLS OR TAPPED RESISTOR SYMBOLS.	16	13	20	14	20	
	32 43-09 DO YOU IDENTIFY OR CLASSIFY THE RESISTORS YOU WORK WITH AS CARBON, FIXED WIRE, SLIDE TAP, RHEOSTAT, OR	13	10	12	9	14	
	33 43-10 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE OHMIC VALUE OF RESISTANCE.	7	7	7	6	11	

PCT WKRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
34 A3-11 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE TOLERANCE.	6	8	6	5	9
35 A3-12 DO YOU USE RESISTOR COLOR CODES WHICH INDICATE FAILURE RATE.	3	3	2	2	5
36 A3-13 DO YOU MAKE DECISIONS IN WHICH YOU MUST DETERMINE HOW TWO OR MORE BATTERIES MUST BE CONNECTED TOGETHER TO	5	6	4	3	9
37 A3-14 DO YOU USE OR REFER TO THE SCHEMATIC SYMBOLS WHICH REPRESENT BATTERIES, FUSES, CONDUCTORS, LAMPS, OR SWITCHES	19	15	25	18	22
38 A3-15 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES RESISTIVE CIRCUITS.	10	9	12	8	16
39 A3-16 DO YOU CALCULATE TOTAL CURRENT FOR SERIES RESISTIVE CIRCUITS.	10	9	11	8	15
40 A3-17 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES RESISTIVE CIRCUITS.	8	9	7	5	16
41 A3-18 DO YOU CALCULATE POWER DISSIPATION FOR SERIES RESISTIVE CIRCUITS.	6	7	5	3	13
42 A3-19 DO YOU CALCULATE TOTAL RESISTANCE FOR SERIES PARALLEL RESISTIVE CIRCUITS.	9	10	9	7	16
43 A3-20 DO YOU CALCULATE TOTAL CURRENT FOR SERIES PARALLEL RESISTIVE CIRCUITS.	9	8	10	7	13
44 A3-21 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	7	8	7	4	14
45 A3-22 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR SERIES PARALLEL RESISTIVE CIRCUITS.	7	7	7	4	13
46 A3-23 DO YOU CALCULATE POWER DISSIPATION FOR SERIES PARALLEL RESISTIVE CIRCUITS.	6	7	4	3	11
47 A3-24 DO YOU CALCULATE TOTAL RESISTANCE FOR PARALLEL RESISTIVE CIRCUITS.	8	8	9	6	14
48 A3-25 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RESISTIVE CIRCUITS.	8	8	8	6	12
49 A3-26 DO YOU CALCULATE INDIVIDUAL VOLTAGE DROPS FOR PARALLEL RESISTIVE CIRCUITS.	7	8	6	4	14
50 A3-27 DO YOU CALCULATE INDIVIDUAL BRANCH CURRENTS FOR PARALLEL RESISTIVE CIRCUITS.	6	6	5	3	11
51 A3-28 DO YOU CALCULATE POWER DISSIPATION FOR PARALLEL RESISTIVE CIRCUITS.	5	6	3	3	9
MULTIMETER USES					
52 B1-21 DO YOU MEASURE RESISTANCE.	42	34	52	42	43
53 B1-22 DO YOU REPAIR OHMMETERS.	0	0	0	0	1
54 B1-23 DO YOU MEASURE VOLTAGE.	68	67	69	65	78
55 B1-24 DO YOU REPAIR VOLTMETERS.	1	1	0	1	1
56 B1-25 DO YOU REPAIR AMMETERS.	1	1	0	1	1
57 B1-26 DO YOU MEASURE CURRENT.	63	62	64	60	68
58 B1-27 DO YOU USE MULTIMETERS.	57	53	62	54	64
59 B1-28 DO YOU DIRECTLY USE A QUANTITY OF CHARGE CALLED A	2	2	1	1	4
60 DO YOU READ SCHEMATICS.	33	29	32	28	35

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

QY-TSK	SPL DD1	SPL DD2	SPL DD3	SPL DD4	SPL DD5	
						ALTERNATING CURRENT
61 B2-01 DO YOU USE OR REFER TO THE TERM EFFECTIVE VOLTAGE (RMS).	43	39	48	42	46	
62 B2-02 DO YOU USE OR REFER TO THE TERM PEAK TO PEAK VOLTAGE.	52	50	54	48	61	
63 B2-03 DO YOU USE OR REFER TO THE TERM AVERAGE VOLTAGE (DC).	50	48	52	47	56	
64 B2-04 DO YOU USE OR REFER TO THE TERM WAVE LENGTH.	36	30	35	33	45	
65 B2-05 DO YOU USE OR REFER TO THE TERM FREQUENCY.	76	73	80	73	81	
66 B2-06 DO YOU USE OR REFER TO THE TERM INSTANTANEOUS VALUE.	13	13	13	11	17	
67 B3-01 DO YOU WORK WITH INDUCTORS OR CIRCUITS CONTAINING INDUCTORS, CHOKES, OR CHOKE COILS IN YOUR PRESENT JOB.	11	10	12	8	18	
						INDUCTORS AND INDUCTIVE REACTANCE
68 B3-02 DO YOU INSPECT INDUCTORS.	2	3	0	1	5	
69 B3-03 DO YOU CLEAN INDUCTORS.	1	2	0	1	2	
70 B3-04 DO YOU ADJUST INDUCTORS.	2	4	0	1	6	
71 B3-05 DO YOU REMOVE OR REPLACE INDUCTORS.	2	4	4	4	4	
72 B3-06 DO YOU USE OR REFER TO INDUCTANCE.	7	8	4	4	14	
73 B3-07 DO YOU USE OR REFER TO HENRIES.	3	4	1	3	4	
74 B3-08 DO YOU USE OR REFER TO INDUCTIVE REACTANCE.	7	9	3	3	16	
75 B3-09 DO YOU USE OR REFER TO COPPER LOSS IN INDUCTORS.	1	2	0	0	3	
76 B3-10 DO YOU USE OR REFER TO HYSTERESIS LOSS IN INDUCTORS.	2	1	0	0	5	
77 B3-11 DO YOU USE OR REFER TO EDDY CURRENT LOSS IM INDUCTORS	2	3	0	0	5	
78 B3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTANCE IS PROPORTIONAL TO THE SQUARE OF THE NUMBER OF	2	3	0	0	7	
79 B2-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE IN- DUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE CROSS	2	3	0	0	5	
80 B2-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS INVERSELY PROPORTIONAL TO ITS	2	3	0	0	5	
81 B2-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE INDUCTANCE OF A COIL IS DIRECTLY PROPORTIONAL TO THE	2	3	0	0	5	
82 B2-16 DO YOU CALCULATE INDUCTANCE FOR PARTICULAR INDUCTORS USING FORMULAS.	2	3	0	0	5	
83 B-17 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTANCE IN SERIES.	2	3	0	0	6	
84 B3-18 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN PARALLEL.	2	3	0	0	5	
85 B3-19 DO YOU CALCULATE THE TOTAL INDUCTANCE FOR INDUCTORS IN SERIES-PARALLEL CIRCUITS.	1	2	0	0	5	
86 B3-20 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT LAGS VOLTAGE IN AC INDUCTOR CIRCUITS.	3	5	0	1	8	
87 B3-21 DO YOU CALCULATE INDUCTIVE REACTANCE.	2	4	0	1	7	
88 B3-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT INDUCTIVE REACTANCE IS DIRECTLY PROPORTIONAL TO FREQUENCY.	4	7	1	1	12	
89 B3-23 DO YOU WORK WITH POWER INDUCTORS.	3	4	1	1	7	
90 B3-24 DO YOU WORK WITH AUDIO FREQUENCY INDUCTORS.	6	8	4	2	16	
91 B3-25 DO YOU WORK WITH RADIO FREQUENCY INDUCTORS.	4	6	1	1	12	

PCT MBRS RESPONDING (YES) BY SELECTED GRPS

AF HUMAN RESOURCES LABORATORY
AIR FORCE SYSTEMS COMMAND

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

CAPACITORS AND
CAPACITIVE REACTANCE

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
	12	11	15	10	20
92 CI-01 DO YOU WORK WITH CAPACITORS OR CIRCUITS CONTAINING CAPACITORS IN YOUR PRESENT JOB.	3	3	2	1	6
93 CI-02 DO YOU INSPECT CAPACITORS.	1	1	1	1	3
94 CI-03 DO YOU CLEAN CAPACITORS.	1	6	0	1	9
95 CI-04 DO YOU ADJUST CAPACITORS.	3	5	1	1	4
96 CI-05 DO YOU TEST CAPACITORS.	2	2	1	1	4
97 CI-06 DO YOU DISCHARGE CAPACITORS.	1	2	0	1	3
98 CI-07 DO YOU REMOVE OR REPLACE CAPACITORS.	1	2	0	0	3
99 CI-08 DO YOU USE OR REFER TO DISTRIBUTED CAPACITANCE.	5	7	2	1	14
100 CI-09 DO YOU USE OR REFER TO ORBITAL STRESS OF ELECTRONS IN DIELECTRIC.	1	2	0	0	3
101 CI-10 DO YOU USE OR REFER TO FARADS, MICROFARADS, OR PICOFARADS.	7	8	6	3	16
102 CI-11 DO YOU USE OR REFER TO CAPACITANCE.	8	10	6	4	20
103 CI-12 DO YOU USE OR REFER TO DIELECTRIC CONSTANT.	4	5	2	1	10
104 CI-13 DO YOU USE OR REFER TO WORKING VOLTAGE RATING OF CAPACITORS.	3	4	1	1	8
105 CI-14 DO YOU USE OR REFER TO CAPACITIVE REACTANCE.	6	8	3	2	16
106 CI-15 DO YOU USE OR REFER TO CAPACITOR COLOR CODES.	1	1	0	0	3
107 CI-16 DO YOU WORK WITH CAPACITORS IN DC CIRCUITS	9	9	9	6	17
108 CI-17 DO YOU WORK WITH CAPACITORS IN AC CIRCUITS	10	10	10	6	19
109 CI-18 DO YOU WORK WITH CAPACITORS IN CIRCUITS WITH BOTH DC AND AC.	8	9	7	5	18
110 CI-19 DO YOU WORK WITH CAPACITORS IN DON'T REMEMBER WHICH CIRCUITS	3	2	3	2	5
111 CI-20 DO YOU CALCULATE CAPACITANCE FOR PARTICULAR CAPACITORS USING FORMULAS	1	2	0	0	3
112 CI-21 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITANCE OF A CAPACITOR IS DIRECTLY PROPORTIONAL TO THE	2	2	0	1	3
113 CI-22 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITANCE OF A CAPACITOR IS INVERSELY PROPORTIONAL TO	1	2	0	0	4
114 CI-23 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES	3	5	0	1	8
115 CI-24 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN PARALLEL	3	4	1	0	9
116 CI-25 DO YOU CALCULATE THE TOTAL CAPACITANCE OF CAPACITORS IN SERIES-PARALLEL CIRCUITS	2	4	0	0	7
117 CI-26 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT THROUGH CAPACITORS, IT ONLY APPEARS TO DO SO	2	3	1	1	6
118 CI-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT	3	4	1	1	7
119 CI-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT CAPACITIVE REACTANCE IS INVERSELY PROPORTIONAL TO	4	6	1	1	11
120 CI-29 DO YOU CALCULATE CAPACITIVE REACTANCE	2	3	0	0	7

AF HUMAN RESOURCES LABORATORY
AIR FORCE SYSTEMS COMMAND

PCT MBRS RESPONDING (YES) BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
C 121 C1-30 DO YOU WORK WITH ROTOR-STATOR (VARIABLE) CAPACITORS	4	7	0	1	11
C 122 C1-31 DO YOU WORK WITH COMPRESSION (TRIMMER) CAPACITORS	2	3	0	0	7
C 123 C1-32 DO YOU WORK WITH ELECTROLYTIC (FIXED) CAPACITORS	5	7	3	2	13
C 124 C1-33 DO YOU WORK WITH PAPER (FIXED) CAPACITORS	4	5	2	1	9
C 125 C1-34 DO YOU WORK WITH MICA (FIXED) CAPACITORS	5	7	2	2	12
C 126 C1-35 DO YOU WORK WITH CERAMIC (FIXED) CAPACITORS	5	7	2	1	14
C 127 C1-36 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF CAPACITORS	5	5	5	3	8
C 128 C2-21 DO YOU WORK WITH TRANSFORMERS IN YOUR PRESENT JOB	22	29	25	19	30
C 129 C2-22 DO YOU INSPECT TRANSFORMERS	4	5	2	2	4
C 130 C2-03 DO YOU CLEAN TRANSFORMERS	1	2	1	0	4
C 131 C2-04 DO YOU ADJUST TRANSFORMERS	5	7	2	1	14
C 132 C2-05 DO YOU TROUBLESHOOT TRANSFORMERS	7	8	5	4	13
C 133 C2-06 DO YOU REMOVE OR REPLACE COMPLETE TRANSFORMERS	4	5	1	1	9
C 134 C2-07 DO YOU REMOVE OR REPLACE TRANSFORMER PARTS, SUCH AS THE PRIMARY WINDING	1	1	0	0	2
C 135 C2-08 DO YOU MAKE A DISTINCTION BETWEEN MUTUAL INDUCTION AND MUTUAL INDUCTANCE (M)	2	2	0	0	5
C 136 C2-09 DO YOU USE THE SYMBOL FOR MUTUAL INDUCTANCE, M	1	2	0	0	3
C 137 C2-10 DO YOU REFER TO OR USE THE COEFFICIENT OF COUPLING WHEN WORKING WITH TRANSFORMERS	2	3	0	0	7
C 138 C2-11 DO YOU CALCULATE TURNS RATIOS FOR TRANSFORMERS USING CURRENT OR VOLTAGE RATIOS	3	3	1	1	7
C 139 C2-12 DO YOU REFER TO REFLECTED IMPEDANCE WHEN WORKING WITH TRANSFORMERS	8	9	7	6	15
C 140 C2-13 DO YOU CALCULATE IMPEDANCE INTERACTIONS FOR TRANSFORMERS	3	3	2	1	7
C 141 C2-14 DO YOU WORK WITH AUTOTRANSFORMERS	2	3	1	1	6
C 142 C2-15 DO YOU WORK WITH POWER TRANSFORMERS	7	9	4	3	18
C 143 C2-16 DO YOU WORK WITH AUDIO TRANSFORMERS	17	18	16	13	29
C 144 C2-17 DO YOU WORK WITH RADIO FREQUENCY TRANSFORMERS	6	8	3	2	15
C 145 C2-18 DO YOU WORK WITH DON'T REMEMBER WHAT TYPE OF TRANSFORMERS	5	4	6	4	6
C 146 C2-19 DO YOU CHECK TRANSFORMERS FOR OPEN WINDINGS BY MEASURING RESISTANCE	4	5	2	1	9
C 147 C2-20 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING RESISTANCE	4	5	1	1	10
C 148 C2-21 DO YOU CHECK TRANSFORMERS FOR SHORTED WINDINGS BY MEASURING OUTPUT VOLTAGES	4	5	2	1	9
C 149 C2-22 DO YOU MEASURE RESISTANCE OF TRANSFORMER WINDINGS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR	2	3	0	0	6
C 150 C2-23 DO YOU MEASURE OUTPUT VOLTAGE OF TRANSFORMERS TO DETERMINE WHETHER A TRANSFORMER HAS A STEP-UP OR STEP-	2	3	0	0	6
C 151 C2-24 DO YOU REFER TO BASIC TRANSFORMER SCHEMATIC SYMBOLS FOR TRANSFORMERS	10	11	9	7	17

CAPACITORS

TRANSFORMERS

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
G 152 C2-25 DO YOU REFER TO MULTIPLE SECONDARY-WINDINGS SCHEMATIC SYMBOLS FOR TRANSFORMERS	5	8	2	3	12
G 153 C2-26 DO YOU REFER TO MULTIPLE TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS	6	7	5	4	12
G 154 C2-27 DO YOU REFER TO CENTER TAP SCHEMATIC SYMBOLS FOR TRANSFORMERS	8	9	7	6	16
G 155 C2-28 DO YOU REFER TO AIR CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS	4	6	2	1	11
G 156 C2-29 DO YOU REFER TO IRON CORE SCHEMATIC SYMBOLS FOR TRANSFORMERS	5	7	2	2	11
G 157 C2-30 DO YOU REFER TO COMBINATIONS OF THE ABOVE SCHEMATIC SYMBOLS FOR TRANSFORMERS	6	7	4	3	11
G 158 C2-31 DO YOU DETERMINE PHASE RELATIONSHIPS BETWEEN SECONDARY AND PRIMARY VOLTAGES OF TRANSFORMERS USING	3	4	0	0	6
G 159 C2-32 DO YOU DETERMINE OR REFER TO THE TYPE OF CORE IN TRANSFORMERS YOU WORK WITH	2	3	0	0	6
G 160 C2-33 DO YOU REFER TO OR USE THE GENERAL RULE THAT THE TURNS RATIO OF A TRANSFORMER IS EQUAL TO THE VOLTAGE RATIO	2	3	0	0	7
C 161 C2-34 DO YOU USE OR REFER TO STEP-UP OR STEP-DOWN RATIOS FOR TRANSFORMERS	4	6	1	2	9
C 162 C2-35 DO YOU CALCULATE VOLTAGE RATIOS FOR TRANSFORMERS USING TURNS RATIOS	2	3	0	0	6
C 163 C2-36 DO YOU CALCULATE CURRENT RATIOS FOR TRANSFORMERS USING TURNS RATIOS	1	2	0	0	5
C 164 C2-37 DOES YOUR JOB INVOLVE ANY TASKS DEALING WITH THREE PHASE TRANSFORMERS	2	3	0	0	6
G 165 C2-38 DO YOU INSPECT THREE PHASE TRANSFORMERS	0	1	0	0	2
G 166 C2-39 DO YOU CLEAN OR LUBRICATE THREE PHASE TRANSFORMERS	0	1	0	0	1
G 167 C2-40 DO YOU ADJUST THREE PHASE TRANSFORMERS	0	1	0	0	3
G 168 C2-41 DO YOU TROUBLESHOOT THREE PHASE TRANSFORMERS	1	2	0	0	4
G 169 C2-42 DO YOU REMOVE OR REPLACE COMPLETE THREE PHASE TRANSFORMERS	1	1	0	0	2
G 170 C2-43 DO YOU REMOVE OR REPLACE THREE PHASE TRANSFORMER PARTS SUCH AS WINDINGS	0	0	0	0	1

MAGNETISM

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
G 171 C3-01 DO YOU USE OR REFER TO PERMANENT MAGNETS	3	4	2	1	7
G 172 C3-02 DO YOU USE OR REFER TO TEMPORARY MAGNETS	3	4	1	1	7
G 173 C3-03 DO YOU USE OR REFER TO RETENTIVITY OF MAGNETIC MATERIALS	2	2	0	1	4
G 174 C3-04 DO YOU USE OR REFER TO RELUCTANCE OF MAGNETIC MATERIALS	2	2	0	0	5
G 175 C3-05 DO YOU USE OR REFER TO PERMEABILITY OF MAGNETIC MATERIALS	2	2	1	1	5
G 176 C3-06 DO YOU USE OR REFER TO RESIDUAL MAGNETISM	2	3	1	1	5
G 177 C3-07 DO YOU USE OR REFER TO MAGNETIC LINES OF FORCE OR	6	8	2	2	16
G 178 C3-08 DO YOU USE OR REFER TO WEBER'S THEORY OF MAGNETISM	1	1	0	0	2

AF HUMAN RESOURCES LABORATORY
AIR FORCE SYSTEMS COMMAND

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
C 179 C3-09 DO YOU USE OR REFER TO DOMAIN THEORY OF MAGNETISM	1	1	0	0	3
C 180 C3-10 DO YOU USE OR REFER TO MAGNETIC INDUCTION	4	7	1	1	11
C 181 C3-11 DO YOU USE OR REFER TO FLUX DENSITY	2	2	0	1	4
C 182 C3-12 DO YOU USE OR REFER TO THE GENERAL RULE THAT FOR MAGNETIC POLES, LIKE POLES REPEL AND UNLIKE POLES ATTRACT	12	13	11	9	20
C 183 C3-13 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE DIRECTION OF MAGNETIC FIELDS ABOUT STRAIGHT WIRES	5	7	2	2	10
C 184 C3-14 DO YOU USE THE LEFT HAND THUMB RULE TO FIND THE NORTH POLE OF A CURRENT CARRYING COIL	4	5	2	2	8
D 185 D1-01 DO YOU WORK WITH RC, LR, RCL CIRCUITS IN YOUR PRESENT JOB	8	9	7	5	16
D 186 D1-02 DO YOU USE OR REFER TO VECTORS WHEN WORKING WITH RCL CIRCUITS	3	5	0	0	9
D 187 D1-03 DO YOU USE OR REFER TO PYTHAGOREAN THEOREM WHEN WORKING WITH RCL CIRCUITS	2	2	0	0	5
D 188 D1-04 DO YOU USE OR REFER TO SINE WHEN WORKING WITH RCL CIRCUITS	2	3	1	1	5
D 189 D1-05 DO YOU USE OR REFER TO COSINE WHEN WORKING WITH RCL CIRCUITS	2	2	1	1	5
D 190 D1-06 DO YOU USE OR REFER TO TANGENT WHEN WORKING WITH RCL CIRCUITS	2	2	1	1	4
D 191 D1-07 DO YOU USE OR REFER TO WATTS WHEN WORKING WITH RCL CIRCUITS	5	7	2	2	11
D 192 D1-08 DO YOU USE OR REFER TO TRUE POWER (PT) WHEN WORKING WITH RCL CIRCUITS	3	4	2	2	7
D 193 D1-09 DO YOU USE OR REFER TO MAXIMUM POWER (PM) WHEN WORKING WITH RCL CIRCUITS	3	5	1	1	9
D 194 D1-10 DO YOU USE OR REFER TO AVERAGE POWER (PAVE) WHEN WORKING WITH RCL CIRCUITS	4	5	2	2	9
D 195 D1-11 DO YOU USE OR REFER TO APPARENT POWER (PA) WHEN WORKING WITH RCL CIRCUITS	2	3	1	1	5
D 196 D1-12 DO YOU USE OR REFER TO POWER FACTOR (PF) WHEN WORKING WITH RCL CIRCUITS	2	4	0	1	7
D 197 D1-13 DO YOU USE OR REFER TO RESONANT CIRCUITS WHEN WORKING WITH RCL CIRCUITS	4	7	1	1	13
D 198 D1-14 DO YOU USE OR REFER TO BANDWIDTH WHEN WORKING WITH RCL CIRCUITS	8	9	5	4	16
D 199 D1-15 DO YOU USE OR REFER TO SELECTIVITY WHEN WORKING WITH RCL CIRCUITS	5	7	3	2	14
D 200 D1-16 DO YOU USE OR REFER TO RESONANT FREQUENCY WHEN WORKING WITH RCL CIRCUITS	6	8	3	2	16
D 201 D1-17 DO YOU USE OR REFER TO HALF POWER POINTS WHEN WORKING WITH RCL CIRCUITS	2	3	1	1	7
D 202 D1-18 DO YOU USE OR REFER TO BANDPASS REGION WHEN WORKING WITH RCL CIRCUITS	6	8	4	3	14
D 203 D1-19 DO YOU USE OR REFER TO CIRCUIT Q WHEN WORKING WITH RCL CIRCUITS	2	4	0	0	7

RCL CIRCUITS

AF HUMAN RESOURCES LABORATORY
AIR FORCE SYSTEMS COMMAND

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK

		SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
D 204	1-20 DO YOU USE OR REFER TO TANK CIRCUITS WHEN WORKING WITH RCL CIRCUITS	4	7	1	1	13
D 205	1-21 DO YOU DETERMINE VALUES OF TRIGONOMETRIC FUNCTIONS USING FORMULAS	1	2	0	0	4
D 206	1-22 DO YOU DRAW VOLTAGE, CURRENT, OR IMPEDANCE VECTOR DIAGRAMS FOR CIRCUITS	2	3	1	0	7
D 207	1-23 DO YOU CALCULATE TOTAL IMPEDANCE FOR CAPACITIVE CIRCUITS	4	5	2	1	9
D 208	1-24 DO YOU CALCULATE PHASE ANGLES BETWEEN IMPEDANCE AND RESISTANCE IN CAPACITIVE CIRCUITS	1	2	0	0	4
D 209	1-25 DO YOU CALCULATE TOTAL IMPEDANCE FOR SERIES RCL CIRCUITS	4	6	1	2	7
D 210	1-26 DO YOU CALCULATE IMPEDANCE ANGLES FOR SERIES RCL CIRCUITS	1	2	0	0	5
D 211	1-27 DO YOU CALCULATE APPARENT POWER (PA) FOR SERIES RCL CIRCUITS	1	2	0	0	5
D 212	1-28 DO YOU CALCULATE TRUE POWER (PT) FOR SERIES RCL CIRCUITS	1	2	0	0	4
D 213	1-29 DO YOU CALCULATE POWER FACTORS (PF) FOR SERIES RCL CIRCUITS	1	2	0	0	5
D 214	1-30 DO YOU CALCULATE TOTAL CURRENT FOR PARALLEL RCL CIRCUITS	2	4	0	0	8
D 215	1-31 DO YOU CALCULATE IMPEDANCE ANGLES FOR PARALLEL RCL CIRCUITS	1	2	0	0	5
D 216	1-32 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING THE ASSUMED VOLTAGE METHOD	2	3	0	0	5
D 217	1-33 DO YOU CALCULATE TOTAL IMPEDANCE FOR PARALLEL RCL CIRCUITS USING OHM'S LAW	3	4	1	1	7
D 218	1-34 DO YOU CHECK CAPACITORS USING OHMMETERS	2	3	0	0	6
D 219	1-35 DO YOU CHECK CAPACITORS USING SUBSTITUTION	2	3	0	0	4
D 220	1-36 DO YOU CHECK INDUCTORS USING OHMMETERS	2	3	0	0	7
D 221	1-37 DO YOU CHECK INDUCTORS USING SUBSTITUTION	1	2	0	0	5
D 222	1-38 DO YOU USE OR REFER TO THE GENERAL RULE THAT THETA= 0, PF = 1, AND PA = PT FOR RESONANT CIRCUITS	1	2	0	0	4
D 223	1-39 DO YOU CALCULATE RESONANT FREQUENCIES FOR RCL CIRCUITS	2	3	0	0	7
D 224	1-40 DO YOU USE OR REFER TO THE GENERAL RULE THAT IMPEDANCE IS MINIMUM AND CURRENT MAXIMUM AT THE RESONANT	3	4	1	1	7
D 225	1-41 DO YOU USE OR REFER TO THE GENERAL RULE THAT LINE CURRENT IS MINIMUM AND IMPEDANCE MAXIMUM AT RESONANT	3	4	1	1	8
D 226	1-42 DO YOU USE OR REFER TO THE GENERAL RULE THAT HALF POWER POINTS ARE AT 70.7 PERCENT OF THE PEAK CURRENT VALUE	3	4	1	1	7
D 227	1-43 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT IS INVERSELY PROPORTIONAL TO Q	3	4	1	1	7
D 228	1-44 DO YOU DETERMINE HOW CHANGES IN FREQUENCY, RESISTANCE CAPACITANCE, OR INDUCTANCE WILL AFFECT CURRENT OR PHASE	3	4	1	1	8

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
D 229 D2-01 IN YOUR PRESENT JOB, DO YOU WORK WITH, USE, OR REFER TO SERIES OR PARALLEL RESONANT CIRCUITS OR TIME CONSTANTS	3	4	2	2	7
D 230 D2-02 DO YOU WORK WITH, USE, OR REFER TO TIME CONSTANTS	2	3	1	1	5
D 231 D2-03 DO YOU WORK WITH, USE, OR REFER TO AVAILABLE VOLTAGE	2	3	1	1	5
D 232 D2-04 DO YOU WORK WITH, USE, OR REFER TO TRANSIENT INTERVALS	2	2	1	1	3
D 233 D2-05 DO YOU USE OR REFER TO THE GENERAL RULE THAT A CAPACITOR IS FULLY CHARGED (OR DISCHARGED) AFTER FIVE (5)	2	2	0	0	5
D 234 D2-06 DO YOU USE OR REFER TO UNIVERSAL TIME CONSTANT CHARTS	1	1	0	0	3
D 235 D2-07 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CIRCUIT CURRENT OR COMPONENT VOLTAGES AFTER A SPECIFIC	1	2	0	0	4
D 236 D2-08 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE THE TIME REQUIRED FOR CIRCUIT CURRENT OR COMPONENT VOLTAGES TO	1	2	0	0	3
D 237 D2-09 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE COMPONENT VALUES REQUIRED FOR CIRCUIT CURRENT AND	1	2	0	0	5
D 238 D2-10 DO YOU USE OR REFER TO THE GENERAL RULE THAT CURRENT IN AN LR CIRCUITS REACHES ITS MINIMUM VALUE (OR ZERO) AFTER	1	2	0	0	3
D 239 D3-01 DO YOU WORK WITH CIRCUITS USED AS FILTERS IN YOUR PRESENT JOB	18	16	20	16	23
D 240 D3-02 DO YOU INSPECT FILTER CIRCUITS	4	6	2	2	9
D 241 D3-03 DO YOU CLEAN FILTER CIRCUITS	2	5	0	0	3
D 242 D3-04 DO YOU ALIGN OR ADJUST FILTER CIRCUITS	3	5	1	1	8
D 243 D3-05 DO YOU TROUBLESHOOT TO THE FILTER CIRCUIT LEVEL	8	8	8	7	11
D 244 D3-06 DO YOU TROUBLESHOOT TO COMPONENT PARTS	2	2	1	1	4
D 245 D3-07 DO YOU REMOVE OR REPLACE THE COMPLETE FILTER CIRCUIT	3	5	1	1	7
D 246 D3-08 DO YOU REMOVE OR REPLACE FILTER CIRCUIT COMPONENT PARTS	1	1	0	0	3
D 247 D3-09 DO YOU WORK WITH LOW PASS FILTERS	10	11	8	7	18
D 248 D3-10 DO YOU WORK WITH HIGH PASS FILTERS	10	11	9	7	18
D 249 D3-11 DO YOU WORK WITH BANDPASS FILTERS	15	15	16	13	21
D 250 D3-12 DO YOU WORK WITH BAND-REJECT FILTERS	10	11	9	7	17
D 251 D3-13 DON'T REMEMBER WHICH TYPE OF FILTER YOU WORK WITH	3	3	4	4	3
D 252 D3-14 DO YOU WORK WITH L-SECTION FILTER CONFIGURATION	2	3	0	0	5
D 253 D3-15 DO YOU WORK WITH T-SECTION FILTER CONFIGURATION	1	2	0	0	4
D 254 D3-16 DO YOU WORK WITH PI-SECTION FILTER CONFIGURATION	1	2	0	0	4
D 255 D3-17 DON'T REMEMBER WHICH TYPE FILTER CONFIGURATION	9	9	9	8	11
D 256 D3-18 DO THE FILTERS YOU WORK WITH USE PARALLEL RESONANT CIRCUITS	5	6	4	3	10
D 257 D3-19 DO THE FILTERS YOU WORK WITH USE SERIES-PARALLEL CIRCUITS	5	6	4	3	10
D 258 D3-20 DO THE FILTERS YOU WORK WITH USE SERIES RESONANT CIRCUITS	5	6	3	3	10

SERIES AND PARALLEL RESONANCE (TIME CONSTANTS)

FILTERS

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
259 D3-21 DON'T REMEMBER WHICH TYPE OF BASIC CIRCUIT	9	8	10	8	11
260 D3-22 DO YOU USE EQUATIONS OR FORMULAS TO DETERMINE CAPACITANCE OR INDUCTANCE VALUES REQUIRED FOR SPECIFIC	2	3	0	0	5
261 E1-01 DO YOU WORK WITH COUPLING DEVICES IN YOUR PRESENT JOB	10	11	9	8	14
262 E1-02 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH RC	3	5	0	1	7
263 E1-03 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	5	7	3	3	9
264 E1-04 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	7	9	4	4	13
265 E1-05 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM RC COUPLING	4	6	2	2	9
266 E1-06 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM IMPEDANCE COUPLING	6	7	5	5	9
267 E1-07 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM TRANSFORMER COUPLING	7	6	6	6	11
268 E1-08 DO YOU WORK WITH DIRECTLY COUPLED CIRCUITS	4	6	3	3	9
269 E1-09 DO YOU WORK WITH CAPACITIVE-RESISTIVE COUPLED CIRCUITS	2	3	1	1	5
270 E1-10 DO YOU WORK WITH CAPACITIVE-INDUCTIVE COUPLED CIRCUITS	2	3	1	1	5
271 E1-11 DO YOU WORK WITH TRANSFORMER COUPLED CIRCUITS	7	8	6	5	11
272 E1-12 DON'T REMEMBER WHICH TYPE OF COUPLING CIRCUITS	3	4	2	2	5
273 E2-01 IN YOUR PRESENT JOB, DO YOU PERFORM SOLDERING TECHNIQUES OR INSPECT OR EVALUATE SOLDERED CONNECTIONS	7	6	9	6	9
274 E2-02 DO YOU SELECT TYPE OF SOLDER TO USE	4	5	3	2	8
275 E2-03 DO YOU ADD FLUX TO CONNECTIONS	3	3	3	2	5
276 E2-04 DO YOU CLEAN CONNECTIONS USING SOLVENTS	3	3	2	2	6
277 E2-05 DO YOU STRIP INSULATION FROM WIRES	5	5	6	4	9
278 E2-06 DO YOU CONNECT OR DISCONNECT HEAT SINKS	3	3	1	1	6
279 E2-07 DO YOU BEND OR SHAPE WIRES OR LEADS	5	5	6	4	9
280 E2-08 DO YOU CUT WIRES	5	5	5	4	8
281 E2-09 DO YOU FILE OR SHAPE SOLDERING IRON TIPS	3	3	4	2	6
282 E2-10 DO YOU TIN SOLDERING IRON TIPS	4	4	2	2	7
283 E2-11 DO YOU CLEAN SOLDERING IRON TIPS	5	5	5	3	8
284 E2-12 DO YOU CLEAN ELECTRICAL SURFACES USING ERASERS	4	3	5	3	7
285 E2-13 DO YOU TIN OR PRE-TIN CONDUCTORS	2	2	3	1	5
286 E2-14 DO YOU INSPECT SOLDERED CONNECTIONS	7	6	8	6	9
287 E2-15 DO YOU DESOLDER CONNECTIONS BY WICKING	3	3	3	1	5
288 E2-16 DO YOU DESOLDER CONNECTIONS USING VACUUM DESOLDERING	2	1	3	2	2
289 E2-17 DO YOU CUT COMPONENT LEADS TO REMOVE COMPONENTS	2	2	2	1	5
290 E2-18 DO YOU CRUSH COMPONENTS FOR REMOVAL	1	1	0	0	2

COUPLING

SOLDERING

FCT MBRS RESPONDING (YES) BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
E 291 E2-19 DO YOU MAKE HARDWIRE CONNECTIONS	5	5	9	3	7	
E 292 E2-20 DO YOU MAKE PRINTED CIRCUIT BOARD CONNECTIONS	1	2	0	0	3	
E 293 E2-21 DO YOU SOLDER PASSIVE COMPONENTS SUCH AS RESISTORS OR	1	2	0	0	3	
CAPACITORS ON PRINTED CIRCUIT BOARDS						
E 294 E2-22 DO YOU SOLDER ACTIVE COMPONENTS SUCH AS SOLID-STATE	1	1	0	0	3	
DIODES OR TRANSISTORS ON PRINTED CIRCUIT BOARDS						
E 295 E3-01 DO YOU WORK WITH RELAYS ON YOUR PRESENT JOB	35	36	35	37	30	RELAYS
E 296 E3-02 DO YOU ADJUST RELAYS	7	6	8	7	7	
E 297 E3-03 DO YOU CLEAN RELAYS	2	3	3	2	6	
E 298 E3-04 DO YOU INSPECT RELAYS	10	11	8	9	12	
E 299 E3-05 DO YOU REMOVE OR REPLACE COMPLETE RELAYS	15	19	10	16	13	
E 300 E3-06 DO YOU REMOVE OR REPLACE PARTS OR RELAYS	2	3	0	2	3	
E 301 E3-07 DO YOU TROUBLESHOOT RELAYS	24	25	23	25	21	
E 302 E3-08 DO YOU STRAIGHTEN RELAY CONTACTS	3	4	2	2	5	
E 303 E3-09 DO YOU PERFORM TASKS ON RELAY CONTACTS	3	2	3	2	9	
E 304 E3-10 DO YOU PERFORM TASKS ON RELAY CORES	1	1	0	0	3	
E 305 E3-11 DO YOU PERFORM TASKS ON RELAY COILB	1	2	0	1	7	
E 306 E3-12 DO YOU PERFORM TASKS ON RELAY ARMATURES	1	2	0	0	3	
E 307 E3-13 DO YOU PERFORM TASKS ON RELAY SPRINGS	1	1	0	0	3	
E 308 E3-14 DO YOU USE OR REFER TO SINGLE POLE, SINGLE THROW	3	4	3	3	5	
(SPST) NORMALLY OPER (NO) SCHEMATIC SYMBOLS FOR RELAYS						
E 309 E3-15 DO YOU USE OR REFER TO SINGLE POLE, SINGLE THROW	3	3	3	3	5	
(SPST) NORMALLY CLOSED (NC) SCHEMATIC SYMBOLS FOR RELAYS						
E 310 E3-16 DO YOU USE OR REFER TO SINGLE POLE, DOUBLE THROW	4	5	4	4	5	
(SPDT) SCHEMATIC SYMBOLS FOR RELAYS						
E 311 E3-17 DO YOU USE OR REFER TO DOUBLE POLE, DOUBLE THROW	4	4	3	3	5	
(DPDT) SCHEMATIC SYMBOLS FOR RELAYS						
E 312 E3-18 DO YOU USE OR REFER TO OTHER RELAY SYMBOLS SCHEMATIC	6	8	4	5	10	
SYMBOLS FOR RELAYS						
E 313 E3-19 DO YOU CHECK ELECTRICAL CONTINUITY OF COILS BY	4	4	4	3	7	
MEASURING RESISTANCE						
F 314 FI-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING	30	32	28	30	31	MICROPHONES
WITH MICROPHONES						
F 315 FI-02 DO YOU INSPECT MICROPHONES	5	5	5	3	10	
F 316 FI-03 DO YOU CLEAN MICROPHONES	3	2	4	3	5	
F 317 FI-04 DO YOU OPERATE MICROPHONES	31	33	28	31	32	
F 318 FI-05 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE	13	10	16	12	14	
CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT						
F 319 FI-06 DO YOU TROUBLESHOOT DOWN TO MICROPHONE PARTS	1	2	1	1	3	
F 320 FI-07 DO YOU REMOVE OR REPLACE COMPLETE MICROPHONES	8	8	8	6	12	
F 321 FI-08 DO YOU REMOVE OR REPLACE MICROPHONE PARTS	1	1	1	1	2	
F 322 FI-09 DO YOU PERFORM TASKS ON CARBON MICROPHONES	6	6	6	5	9	
F 323 FI-10 DO YOU PERFORM TASKS ON CAPACITOR MICROPHONES	1	2	0	0	4	
F 324 FI-11 DO YOU PERFORM TASKS ON CRYSTAL MICROPHONES	2	3	2	1	5	
F 325 FI-12 DO YOU PERFORM TASKS ON DYNAMIC MICROPHONES	6	8	4	5	9	
F 326 FI-13 DO YOU PERFORM TASKS ON VELOCITY RIBBON MICROPHONES	1	1	0	1	1	

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
F 327 F2-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH SPEAKERS	51	50	51	49	84
F 328 F2-02 DO YOU INSPECT SPEAKERS	7	7	7	5	10
F 329 F2-03 DO YOU CLEAN SPEAKERS	3	3	4	2	5
F 330 F2-04 DO YOU OPERATE SPEAKERS	51	81	80	47	53
F 331 F2-05 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS BUT DO NOT TROUBLESHOOT DOWN TO COMPONENT	20	19	22	18	26
F 332 F2-06 DO YOU TROUBLESHOOT DOWN TO SPEAKER PARTS	2	2	0	1	4
F 333 F2-07 DO YOU REMOVE OR REPLACE COMPLETE SPEAKERS	5	6	4	3	9
F 334 F2-08 DO YOU REMOVE OR REPLACE SPEAKER PARTS	1	1	0	0	2
F 335 F2-09 DO YOU PERFORM ANY TASKS ON SPEAKER CONES	1	2	0	1	3
F 336 F2-10 DO YOU PERFORM ANY TASKS ON SPEAKER SPIDERS	0	1	0	0	1
F 337 F2-11 DO YOU PERFORM ANY TASKS ON SPEAKER FIELD COILS	1	1	0	0	2
F 338 F2-12 DO YOU PERFORM ANY TASKS ON SPEAKER VOICE COILS	1	1	0	1	2
F 339 F2-13 DO YOU PERFORM ANY TASKS ON SPEAKER PERMANENT MAGNETS	1	1	0	0	2
F 340 F2-14 DO YOU PERFORM ANY TASKS ON SPEAKER ELECTROMAGNETS	1	1	0	0	2
F 341 F2-15 DO YOU PERFORM ANY TASKS ON SPEAKER SOFT IRON CORES	0	1	0	0	1
F 342 F3-01 DO YOU USE OSCILLOSCOPES IN YOUR PRESENT JOB	73	72	74	71	79
F 343 F3-02 DO YOU USE OSCILLOSCOPES TO PERFORM OPERATIONAL CHECKS	66	66	65	62	75
F 344 F3-03 DO YOU USE OSCILLOSCOPES TO PERFORM ALIGNMENTS OR ADJUSTMENTS	30	30	31	29	35
F 345 F3-04 DO YOU USE OSCILLOSCOPES TO TROUBLESHOOT ELECTRONIC CIRCUITS	48	51	44	45	55
F 346 F3-05 DO YOU USE OSCILLOSCOPES TO MEASURE FREQUENCY	46	43	40	43	55
F 347 F3-06 DO YOU USE OSCILLOSCOPES TO MEASURE TIME	36	38	33	31	46
F 348 F3-07 DO YOU USE OSCILLOSCOPES TO OBSERVE LISAJOUS PATTERNS	24	24	23	20	32
F 349 F3-08 DO YOU USE OSCILLOSCOPES TO OBSERVE SIGNALS WHILE UTILIZING ATTENUATOR PROBES	21	25	18	15	35
F 350 F3-09 DO YOU USE OSCILLOSCOPES TO MAKE FREQUENCY OR TIME MEASUREMENTS USING DELAY TIME MULTIPLIERS	20	21	20	16	30
F 351 F3-10 DO YOU USE OSCILLOSCOPES TO MEASURE AC VOLTAGE	40	30	42	35	51
F 352 F3-11 DO YOU USE OSCILLOSCOPES TO MEASURE OR OBSERVE THE GAIN AND DC BAL CONTROLS SIGNALS AFTER FIRST ADJUSTING	28	28	32	24	40
F 353 F3-12 DO YOU USE OSCILLOSCOPES TO MEASURE DC VOLTAGE	42	45	38	36	55
G 354 G1-01 DO YOU WORK WITH SEMICONDUCTOR DIODES IN YOUR PRESENT JOB	3	3	3	3	5
G 355 G1-02 DO YOU INSPECT DIODES	2	2	0	0	5
G 356 G1-03 DO YOU REMOVE OR REPLACE DIODES	1	1	0	0	3
G 357 G1-04 DO YOU CHECK DIODES USING AN INSTRUMENT	1	2	0	0	4
G 358 G1-05 DO YOU USE ENERGY LEVEL DIAGRAMS IN YOUR WORK WITH DIODES	0	1	0	0	1
G 359 G1-06 DO YOU USE PN JUNCTION DIODE CHARACTERISTIC CURVES, TOGETHER WITH VALUES OF FORWARD AND REVERSE BIAS VOLTAGE,	1	2	0	0	4
G 360 G1-07 DO YOU COMPUTE FORWARD OR REVERSE BIAS RESISTANCE FOR DIODES	1	2	0	0	5

SPEAKERS

OSCILLOSCOPES

SEMICONDUCTOR DIODES

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
G 361 G1-08 DO YOU USE OR REFER TO THE GENERAL RULE THAT TEMPERATURE CAN AFFECT THE OPERATION OF DIODES	2	3	1	1	5
G 362 G1-09 DO YOU IDENTIFY SEMICONDUCTOR DIODES AS OPPOSED TO OTHER ELECTRONIC COMPONENTS, SUCH AS RESISTORS, BASED ON	2	3	0	1	5
G 363 G1-10 DO YOU REFER TO OR DO YOU DETERMINE THE GENERAL EFFECTS OF DOPING ON CURRENT FLOW	1	2	0	0	4
G 364 G1-11 DO YOU USE OR REFER TO MEASUREMENTS OF FORWARD BIAS RESISTANCE	1	2	0	0	4
G 365 G1-12 DO YOU USE OR REFER TO DIODE COLOR CODING	1	2	0	0	3
G 366 G1-13 DO YOU USE OR REFER TO CENTRIFUGAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS	1	1	0	0	3
G 367 G1-14 DO YOU USE OR REFER TO CENTRIPETAL FORCE OF AN ELECTRON IN ORBIT AROUND A NUCLEUS	1	1	0	0	2
G 368 G1-15 DO YOU USE OR REFER TO DIODE NUMBERING SYSTEM, SUCH AS IN 538	0	1	0	0	1
G 369 G1-16 DO YOU USE OR REFER TO KINETIC ENERGY OF AN ELECTRON MOVING IN ORBIT	1	2	0	0	3
G 370 G1-17 DO YOU USE OR REFER TO POTENTIAL ENERGY OF AN ELECTRON MOVING IN ORBIT	1	2	0	0	3
G 371 G1-18 DO YOU USE OR REFER TO MEASUREMENTS OF REVERSE BIAS RESISTANCE	1	2	0	0	5
G 372 G1-19 DO YOU USE OR REFER TO NUMBER OF ELECTRONS IN A PARTICULAR SHELL OR ORBIT	1	1	0	0	3
G 373 G1-20 DO YOU USE OR REFER TO PERMISSIBLE ENERGY LEVELS OF AN ORBITING ELECTRON	0	1	0	0	1
G 374 G1-21 DO YOU USE OR REFER TO FORBIDDEN ENERGY LEVELS OF AN ORBITING ELECTRON	0	1	0	0	1
G 375 G1-22 DO YOU USE OR REFER TO VALENCE ELECTRONS (THOSE IN THE OUTERMOST SHELL)	1	1	0	0	3
G 376 G1-23 DO YOU USE OR REFER TO ATOMIC NUMBER (TOTAL NUMBER OF ELECTRONS IN ATOM)	1	1	0	0	3
G 377 G1-24 DO YOU USE OR REFER TO SYMBOLS ON THE DIODE WHICH INDICATE THE CATHODE END	2	3	0	1	5
G 378 G1-25 DO YOU NEED TO KNOW WHICH MATERIALS ARE USED IN THE CONSTRUCTION OF DIODES SUCH AS GERMANIUM OR SILICON	1	1	0	0	3
G 379 G1-26 DO YOU NEED TO KNOW THAT SEMICONDUCTORS HAVE NEGATIVE TEMPERATURE COEFFICIENTS OF RESISTANCE (AS TEMPERATURE	2	3	0	0	5
G 380 G1-27 DO YOU USE OR REFER TO PN JUNCTION DIODE CHARACTERISTIC CURVES, SUCH AS VOLTAGE - CURRENT	1	2	0	0	5
G 381 G1-28 DO YOU DETERMINE WHETHER PN JUNCTION DIODES ARE FORWARD BIASED OR REVERSE BIASED WHEN YOU READ OR	1	2	0	0	5
G 382 G1-29 DO YOU USE OR REFER TO VALENCE BAND IN SEMICONDUCTOR MATERIALS	1	1	0	0	3

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
G 383 G1-30 DO YOU USE OR REFER TO FORBIDDEN BAND IN SEMICONDUCTOR MATERIALS	1	1	0	0	1
G 384 G1-31 DO YOU USE OR REFER TO CONDUCTION BAND IN SEMICONDUCTOR MATERIALS	1	1	0	0	3
G 385 G1-32 DO YOU USE OR REFER TO COVALENT BONDING IN SEMICONDUCTOR MATERIALS	1	2	0	0	3
G 386 G1-33 DO YOU USE OR REFER TO ELECTRON-HOLE PAIR CREATED IN SEMICONDUCTORS	1	2	0	0	4
G 387 G1-34 DO YOU USE OR REFER TO ELECTRON FLOW OR HOLE FLOW IN SEMICONDUCTORS	1	2	0	0	5
G 388 G1-35 DO YOU USE OR REFER TO DONOR IMPURITY IN SEMICONDUCTORS	1	1	0	0	3
G 389 G1-36 DO YOU USE OR REFER TO ACCEPTOR IMPURITY IN SEMICONDUCTORS	1	1	0	0	3
G 390 G1-37 DO YOU USE OR REFER TO P-TYPE SEMICONDUCTOR MATERIAL	1	2	0	0	4
G 391 G1-38 DO YOU USE OR REFER TO N-TYPE SEMICONDUCTOR MATERIAL	1	2	0	0	4
G 392 G1-39 DO YOU USE OR REFER TO MAJORITY CARRIERS IN SEMICONDUCTORS	1	1	0	0	3
G 393 G1-40 DO YOU USE OR REFER TO MINORITY CARRIERS IN SEMICONDUCTORS	1	1	0	0	3
G 394 G1-41 DO YOU USE OR REFER TO JUNCTION RECOMBINATION IN SEMICONDUCTORS	1	1	0	0	3
G 395 G1-42 DO YOU USE OR REFER TO DEPLETION REGION IN SEMICONDUCTORS	1	2	0	0	4
G 396 G1-43 DO YOU USE OR REFER TO RELATIONSHIP BETWEEN BARRIER WIDTH AND DIFFERENCE OF POTENTIAL	1	1	0	0	3
G 397 G1-44 DO YOU USE OR REFER TO THE 10:1 BACK TO FRONT RESISTANCE RATIO FOR DIODES	1	1	0	0	3
G 398 G1-45 DO YOU USE OR REFER TO BARRIER HEIGHT IN SEMICONDUCTORS	1	1	0	0	2
G 399 G1-46 DO YOU USE OR REFER TO DIODE SUBSTITUTION INFORMATION	1	2	0	0	3
G 400 G1-47 DO YOU USE OR REFER TO MAXIMUM AVERAGE FORWARD CURRENT DIODE RATINGS	1	2	0	0	5
G 401 G1-48 DO YOU USE OR REFER TO PEAK RECURRENT FORWARD CURRENT DIODE RATINGS	1	2	0	0	5
G 402 G1-49 DO YOU USE OR REFER TO MAXIMUM SURGE CURRENT DIODE RATINGS	1	2	0	0	5
G 403 G1-50 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE DIODE RATINGS	1	2	0	0	5
G 404 G2-01 DO YOU WORK WITH TRANSISTORS IN YOUR PRESENT JOB.	9	5	3	2	9
G 405 G2-02 DO YOU INSPECT TRANSISTORS	2	2	1	0	5
G 406 G2-03 DO YOU REMOVE OR REPLACE TRANSISTORS	1	2	0	0	3
G 407 G2-04 DO YOU CHECK TRANSISTORS USING AN INSTRUMENT	2	3	1	1	5
G 408 G2-05 DO YOU USE OR REFER TO EMITTER - BASE (EB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS	2	3	0	0	5
G 409 G2-06 DO YOU USE OR REFER TO COLLECTOR - BASE (CB) FORWARD AND REVERSE RESISTANCE MEASUREMENTS	2	3	0	0	5

TRANSISTORS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
G 410 G2-07 DO YOU USE OR REFER TO EMITTER - COLLECTOR (EC) RESISTANCE MEASUREMENTS	2	3	0	0	5	
G 411 G2-08 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE EMITTER - BASE JUNCTION	2	3	0	0	5	
G 412 G2-09 DO YOU USE OR REFER TO HOW BIASING AFFECTS THE PHYSICAL BARRIER WIDTH OF THE COLLECTOR - BASE JUNCTION	2	3	0	0	5	
G 413 G2-10 DO YOU USE OR REFER TO THE PHYSICAL SIZE OF THE TRANSISTOR STRUCTURE (COLLECTOR, BASE AND EMITTER)	2	3	0	0	7	
G 414 G2-11 DO YOU USE OR REFER TO LEAKAGE CURRENT (ICBO) IN A TRANSISTOR	2	3	0	0	5	
G 415 G2-12 DO YOU USE OR REFER TO TRANSISTOR SCHEMATIC SYMBOLS	3	5	1	1	8	
G 416 G2-13 DO YOU USE OR REFER TO TRANSISTOR NOTATION SUCH AS Q1, Q2, Q3, ETC	2	4	0	1	7	
G 417 G2-14 DO YOU USE OR REFER TO TRANSISTOR SUBSTITUTION INFORMATION	1	2	0	0	4	
G 418 G2-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE TRANSISTOR BASE CURRENT IB IS NORMALLY SIGNIFICANTLY	2	3	0	0	6	
G 419 G2-16 DO YOU USE THE INFORMATION THAT THE EFFECT OF EMITTER BASE VOLTAGE ON BASE CURRENT IS THE CONTROLLING FACTOR FOR	2	3	0	0	6	
G 420 G2-17 DO YOU USE THE GENERAL RULE THAT LEAKAGE CURRENT (ICBO) IN A TRANSISTOR INCREASES AS TEMPERATURE INCREASES	2	3	0	0	6	
G 421 G2-18 DO YOU USE OR REFER TO TRANSISTOR CHARACTERISTIC CURVES	2	3	0	0	6	
G 422 G2-19 DO YOU USE OR REFER TO BETA TRANSISTOR GAINS	1	2	0	0	5	
G 423 G2-20 DO YOU USE OR REFER TO ALPHA TRANSISTOR GAINS	1	2	0	0	5	
G 424 G2-21 DO YOU USE OR REFER TO GAMMA TRANSISTOR GAINS	1	2	0	0	5	
G 425 G2-22 DO YOU CALCULATE BETA TRANSISTOR GAINS	1	2	0	0	4	
G 426 G2-23 DO YOU CALCULATE ALPHA TRANSISTOR GAINS	1	2	0	0	4	
G 427 G2-24 DO YOU CALCULATE GAMMA TRANSISTOR GAINS	1	2	0	0	4	
G 428 G3-01 DO YOU WORK WITH TRANSISTOR AMPLIFIERS IN YOUR PRESENT JOB	12	10	13	12	11	
G 429 G3-02 DO YOU INSPECT TRANSISTOR AMPLIFIERS	3	3	2	1	6	
G 430 G3-03 DO YOU ALIGN OR ADJUST TRANSISTOR AMPLIFIERS	8	7	10	8	8	
G 431 G3-04 DO YOU TROUBLESHOOT TO THE AMPLIFIER CIRCUIT LEVEL	7	6	8	6	7	TRANSISTOR
G 432 G3-05 DO YOU TROUBLESHOOT TO AMPLIFIER COMPONENTS	1	1	0	0	2	AMPLIFIERS
G 433 G3-06 DO YOU REMOVE OR REPLACE THE COMPLETE AMPLIFIER	8	6	11	7	9	
G 434 G3-07 DO YOU REMOVE OR REPLACE AMPLIFIER COMPONENTS	0	1	0	0	1	
G 435 G3-08 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR CURRENT WHICH RESULTS FROM A CHANGE IN BASE	1	2	0	0	3	
G 436 G3-09 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN	1	2	0	0	3	

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
G 437 G3-10 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN COLLECTOR VOLTAGE WHICH RESULTS FROM A CHANGE IN BASE	1	2	0	0	3
G 438 G3-11 DO YOU USE OR REFER TO (COMMON EMITTER) THE	1	1	0	0	3
G 439 G3-12 DO YOU USE OR REFER TO (COMMON EMITTER) THE CHANGE IN CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN BASE CURRENT WHICH RESULTS FROM AN INPUT SIGNAL	1	1	0	0	3
G 440 G3-13 DO YOU USE OR REFER TO (COMMON EMITTER) THE CALCULATIONS NECESSARY TO MEASURE THE SPECIFIC CHANGE IN	1	1	0	0	3
G 441 G3-14 DO YOU USE THE LOAD-LINE METHOD OF ANALYSIS IN YOUR CIRCUIT ANALYSIS (THIS METHOD REQUIRES YOU TO PLOT A	1	1	0	0	2
G 442 G3-15 DO YOU USE OR REFER TO THE OPERATING POINT Q (QUIESCENT POINT) FOR A TRANSISTOR	1	2	0	0	3
G 443 G3-16 DO YOU CALCULATE THE SPECIFIC QUIESCENT POINT FOR A PARTICULAR TRANSISTOR	1	1	0	0	3
G 444 G3-17 DO YOU MEASURE VOLTAGE GAIN USED IN THE COMMON EMITTER CONFIGURATION	3	3	2	1	6
G 445 G3-18 DO YOU MEASURE CURRENT GAIN USED IN THE COMMON EMITTER CONFIGURATION	2	3	1	1	6
G 446 G3-19 DO YOU MEASURE POWER GAIN USED IN THE COMMON EMITTER CONFIGURATION	5	8	5	4	9
G 447 G3-20 DO YOU CALCULATE THE VOLTAGE GAIN FOR SPECIFIC TRANSISTORS USING A FORMULA THAT IS. DO YOU DIVIDE THE CHANGE	1	1	0	0	2
G 448 G3-21 DO YOU CALCULATE THE CURRENT GAIN FOR SPECIFIC TRANSISTORS USING A FORMULA THAT IS. DO YOU DIVIDE THE	1	1	0	0	3
G 449 G3-22 DO YOU CALCULATE THE POWER GAIN FOR A SPECIFIC TRANSISTOR USING A FORMULA THAT IS. DO YOU MULTIPLY THE	1	1	0	0	3
G 450 G3-23 DO YOU NEED TO KNOW THAT MORE COLLECTOR CURRENT IS GENERATED WITH LESS COLLECTOR VOLTAGE AS TEMPERATURE	1	1	0	0	2
G 451 G3-24 DO YOU COMPUTE THE STATIC OPERATING POINT [Q] OF A TRANSISTOR AT DIFFERENT TEMPERATURES	1	1	0	0	2
G 452 G3-25 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	1	2	0	0	3
G 453 G3-26 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH SELF-	1	2	0	0	3

PCT GRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

ID	D3-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
G 454	G3-27 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	1	2	0	0	3
G 455	G3-28 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	1	2	0	0	3
G 456	G3-29 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	1	2	0	0	3
G 457	G3-30 DO YOU IDENTIFY ON SCHEMATIC DIAGRAMS AND RELATE TO THE ACTUAL CIRCUITRY THE COMPONENTS ASSOCIATED WITH	1	1	0	0	3
G 458	G3-31 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM EMITTER (SWAMPING) RESISTOR STABILIZATION	1	1	0	0	2
G 459	G3-32 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM SELF-BIAS STABILIZATION	1	1	0	0	2
G 460	G3-33 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM THERMISTOR STABILIZATION	1	1	0	0	3
G 461	G3-34 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM FORWARD BIAS DIODE STABILIZATION	1	1	0	0	3
G 462	G3-35 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM REVERSE BIAS DIODE STABILIZATION	1	1	0	0	3
G 463	G3-36 DO YOU TROUBLESHOOT CIRCUITS WHICH HAVE COMPONENTS WHICH PERFORM DOUBLE DIODE STABILIZATION	1	1	0	0	2
G 464	G3-37 DO YOU IDENTIFY AMPLITUDE DISTORTION FOR TRANSISTOR CIRCUITS	4	4	4	3	5
G 465	G3-38 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF AMPLITUDE DISTORTION	2	2	1	1	4
G 466	G3-39 DO YOU IDENTIFY FREQUENCY DISTORTION FOR TRANSISTOR CIRCUITS	4	3	4	2	7
G 467	G3-40 DO YOU IDENTIFY PHASE DISTORTION FOR TRANSISTOR CIRCUITS	3	3	3	2	6
G 468	G3-41 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF PHASE DISTORTION	2	2	2	1	4
G 469	G3-42 DO YOU TROUBLESHOOT TRANSISTOR CIRCUITS TO FIND THE CAUSES OF FREQUENCY DISTORTION	2	2	2	1	4
G 470	G3-43 DO YOU NEED TO KNOW THE DEGENERATIVE EFFECTS ON THE CIRCUIT CAUSED BY CHANGING EMITTER RESISTANCE FOR	1	1	0	0	3
G 471	G3-44 DO YOU DETERMINE THE CLASS OF OPERATION FOR AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER CIRCUITS	1	2	0	0	3
G 472	G3-45 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS	1	1	0	0	2
G 473	G3-46 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS	1	2	0	0	3
G 474	G3-47 DO YOU TROUBLESHOOT OR REPAIR COMPLEMENTARY SYMMETRY CIRCUITS	1	1	0	0	3
G 475	G3-48 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED AMPLIFIERS	1	1	0	0	2

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 006	
476 G3-49 DO YOU TROUBLESHOOT OR REPAIR CASCADE-CONNECTED AMPLIFIERS	1	2	0	0	3	
477 M1-01 DO YOU USE OR REFER TO VARACTORS	2	3	1	1	5	
478 M1-02 DO YOU USE OR REFER TO TUNNEL DIODES	3	6	0	1	7	
479 M1-03 DO YOU USE OR REFER TO FIELD EFFECT TRANSISTORS (FET)	2	4	0	1	6	SOLID-STATE SPECIAL PURPOSE DEVICES
480 M1-04 DO YOU USE OR REFER TO UNIJUNCTION TRANSISTORS	1	2	0	0	4	
481 M1-05 DO YOU USE OR REFER TO ZENER DIODES	4	5	2	2	9	
482 M1-06 DO YOU USE OR REFER TO INTEGRATED CIRCUITS	10	9	12	12	19	
483 M2-01 IN YOUR PRESENT JOB, DO YOU WORK WITH POWER SUPPLIES	27	28	26	24	39	
484 M2-02 DO YOU INSPECT POWER SUPPLIES	8	10	4	5	14	
485 M2-03 DO YOU CLEAN POWER SUPPLIES	2	4	2	3	8	POWER SUPPLIES
486 M2-04 DO YOU ALIGN OR ADJUST POWER SUPPLIES	5	6	2	3	8	
487 M2-05 DO YOU TROUBLESHOOT TO POWER SUPPLY CIRCUIT LEVEL	13	15	12	11	19	
488 M2-06 DO YOU TROUBLESHOOT TO POWER SUPPLY COMPONENTS	2	4	3	3	5	
489 M2-07 DO YOU REMOVE OR REPLACE COMPLETE POWER SUPPLIES	4	6	3	3	9	
490 M2-08 DO YOU REMOVE OR REPLACE POWER SUPPLY COMPONENTS	1	2	0	0	3	
491 M2-09 DO YOU WORK WITH HALF-WAVE RECTIFIERS	3	3	0	0	6	
492 M2-10 DO YOU WORK WITH FULL-WAVE RECTIFIERS OTHER THAN BRIDGE RECTIFIERS	2	4	0	0	7	
493 M2-11 DO YOU WORK WITH BRIDGE RECTIFIERS	3	4	1	1	6	
494 M2-12 DO YOU WORK WITH THREE-PHASE RECTIFIERS	1	2	0	0	4	
495 M2-13 DO YOU USE OR REFER TO INPUT VOLTAGE	6	7	5	5	9	
496 M2-14 DO YOU USE OR REFER TO INPUT FREQUENCY	8	6	9	3	9	
497 M2-15 DO YOU USE OR REFER TO PEAK OUTPUT VOLTAGE	6	7	5	5	12	
498 M2-16 DO YOU USE OR REFER TO AVERAGE OUTPUT VOLTAGE	5	6	4	3	8	
499 M2-17 DO YOU USE OR REFER TO RIPPLE AMPLITUDE	3	3	2	2	5	
500 M2-18 DO YOU USE OR REFER TO RIPPLE FREQUENCY	2	3	2	1	5	
501 M2-19 DO YOU USE OR REFER TO PEAK REVERSE (INVERSE) VOLTAGE	2	4	2	1	4	
502 M2-20 DO YOU USE OR REFER TO SHAPE OF OUTPUT WAVEFORMS	6	7	4	3	11	
503 M2-21 DO YOU USE OR REFER TO EFFECTIVE OUTPUT VOLTAGE	6	7	4	3	10	
504 M2-22 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE	5	5	5	3	9	
505 M2-23 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE	4	5	3	2	9	FILTERS
506 M2-24 DO YOU WORK WITH CIRCUITS WHICH EMPLOY CAPACITIVE INPUT L-TYPE FILTERS	2	2	1	1	5	
507 M2-25 DO YOU WORK WITH CIRCUITS WHICH EMPLOY INDUCTIVE INPUT L-TYPE FILTERS	1	2	0	0	4	
508 M2-26 DO YOU WORK WITH CIRCUITS WHICH EMPLOY LC PI-TYPE FILTERS	1	2	0	0	4	
509 M2-27 DO YOU WORK WITH CIRCUITS WHICH EMPLOY RC PI-TYPE FILTERS	1	2	0	0	4	
510 M2-28 DO YOU WORK WITH CIRCUITS WHICH EMPLOY 20n+T REMEMBER WHICH TYPE OF FILTER	8	9	8	8	9	
511 M2-29 DO YOU HAVE THE OPTION OF REPLACING ONE TYPE OF FILTER WITH A DIFFERENT TYPE FILTER	3	3	1	1	6	
512 M3-01 DO YOU WORK WITH OSCILLATORS IN YOUR PRESENT JOB	57	53	63	55	64	OSCILLATORS

AF HUMAN RESOURCES LABORATORY
AIR FORCE SYSTEMS COMMAND

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
513 M3-02 DO YOU INSPECT OSCILLATORS	10	9	10	7	17
514 M3-03 DO YOU ALIGN OR ADJUST OSCILLATORS	25	23	27	22	33
515 M3-04 DO YOU REMOVE OR REPLACE COMPLETE OSCILLATORS	9	9	9	6	16
516 M3-05 DO YOU REMOVE OR REPLACE OSCILLATOR COMPONENTS	1	1	1	0	3
517 M3-06 DO YOU TROUBLESHOOT TO OSCILLATOR CIRCUIT LEVEL	10	11	8	8	14
518 M3-07 DO YOU TROUBLESHOOT TO OSCILLATOR COMPONENTS	2	2	0	0	5
519 M3-08 DO YOU USE OR REFER TO FEEDBACK	22	19	27	22	24
520 M3-09 DO YOU USE OR REFER TO FREQUENCY DETERMINING DEVICES	19	19	19	17	24
(FDD)					
521 M3-10 DO YOU USE OR REFER TO AMPLITUDE STABILITY	24	19	30	23	28
522 M3-11 DO YOU USE OR REFER TO FREQUENCY STABILITY	30	26	35	29	33
523 M3-12 DO YOU USE OR REFER TO DAMPING	15	14	17	13	22
524 M3-13 DO YOU USE OR REFER TO REGENERATIVE FEEDBACK	13	12	16	12	16
525 M3-14 DO YOU USE OR REFER TO PIEZOELECTRIC EFFECT	3	4	1	1	8
526 M3-15 DO YOU USE OR REFER TO CRITICAL DAMPING	4	6	1	1	9
527 M3-16 DO YOU USE OR REFER TO UNDER DAMPING	4	5	2	1	9
528 M3-17 DO YOU USE OR REFER TO OVER DAMPING	4	5	2	1	9
529 M3-18 DO YOU WORK WITH OSCILLATORS WHICH USE LC TANK	4	5	2	2	7
CIRCUITS AS FDD					
530 M3-19 DO YOU WORK WITH OSCILLATORS WHICH USE RC NETWORKS AS	5	5	5	5	6
FDD					
531 M3-20 DO YOU WORK WITH OSCILLATORS WHICH USE CRYSTALS AS	8	9	7	7	11
FDD					
532 M3-21 DO YOU WORK WITH OSCILLATORS WHICH USE DON'T REMEMBER	25	24	27	25	27
WHICH TYPE OF FDD					
533 M3-22 DO YOU WORK WITH SERIES HARTLEY SINUSOIDAL	3	3	3	1	6
OSCILLATORS					
534 M3-23 DO YOU WORK WITH SHUNT HARTLEY SINUSOIDAL OSCILLATORS	3	4	1	1	7
535 M3-24 DO YOU WORK WITH COLPITTS SINUSOIDAL OSCILLATORS	2	3	1	1	5
536 M3-25 DO YOU WORK WITH CLAPP SINUSOIDAL OSCILLATORS	2	3	1	1	4
537 M3-26 DO YOU WORK WITH BUTLER SINUSOIDAL OSCILLATORS	2	3	1	1	6
538 M3-27 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE OF	29	28	30	27	34
OSCILLATORS					
539 I1-01 DO YOU WORK WITH MULTIVIBRATORS IN YOUR PRESENT JOB	2	4	0	0	7
540 I1-02 DO YOU INSPECT HAVE GENERATING OR SHAPING CIRCUITS	1	2	0	0	4
541 I1-03 DO YOU ALIGN OR ADJUST HAVE GENERATING OR SHAPING	2	2	0	0	5
CIRCUITS						MULTIVIBRATORS
542 I1-04 DO YOU CALIBRATE HAVE GENERATING OR SHAPING CIRCUITS	1	2	0	0	4
543 I1-05 DO YOU TROUBLESHOOT TO HAVE GENERATING OR SHAPING	2	3	0	0	5
CIRCUITS					
544 I1-06 DO YOU TROUBLESHOOT TO HAVE GENERATING OR SHAPING	1	1	0	0	3
CIRCUIT COMPONENTS					
545 I1-07 DO YOU REMOVE OR REPLACE COMPLETE HAVE GENERATING OR	1	2	0	0	4
SHAPING CIRCUITS					
546 I1-08 DO YOU REMOVE OR REPLACE HAVE GENERATING OR SHAPING	0	0	0	0	1
COMPONENTS					
547 I1-29 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN LC TANK	1	1	0	0	3
CIRCUITS					

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
1 548 11-10 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN RC NETWORKS	1	1	0	0	3	
1 549 11-11 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN CRYSTALS	1	1	0	0	3	
1 550 11-12 DO YOU WORK WITH MULTIVIBRATORS WHICH CONTAIN DON'T REMEMBER WHICH TYPE OF FDD	2	2	1	1	5	
MULTIVIBRATORS						
1 551 11-13 DO YOU WORK WITH ASTABLE MULTIVIBRATORS	1	2	0	0	3	
1 552 11-14 DO YOU WORK WITH MONOSTABLE MULTIVIBRATORS	1	2	0	0	3	
1 553 11-15 DO YOU WORK WITH BISTABLE MULTIVIBRATORS	1	2	0	0	3	
1 554 11-16 DO YOU WORK WITH DON'T REMEMBER WHICH TYPE	1	2	0	0	4	
MULTIVIBRATORS						
1 555 12-01 DO YOU WORK WITH LIMITERS OR CLAMPERS IN YOUR PRESENT JOB	3	4	1	1	7	LIMITERS AND CLAMPERS
1 556 12-02 DO YOU WORK WITH SERIES DIODE LIMITERS	1	2	0	0	5	
1 557 12-03 DO YOU WORK WITH SHUNT DIODE LIMITERS	1	2	0	0	4	
1 558 12-04 DO YOU WORK WITH LIMITERS WITH BIAS	1	2	0	0	4	
1 559 12-05 DO YOU WORK WITH ZENER DIODE LIMITERS	1	2	0	0	3	
1 560 12-06 DO YOU WORK WITH TRANSISTOR LIMITERS	1	2	0	0	3	
1 561 12-07 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF LIMITERS	2	3	1	1	5	
1 562 12-08 DO YOU WORK WITH BASIC DIODE CLAMPING CIRCUITS	1	2	0	0	3	
1 563 12-09 DO YOU WORK WITH DIODE CLAMPING CIRCUITS WITH BIAS	1	2	0	0	3	
1 564 12-10 DO YOU WORK WITH DON'T KNOW WHICH TYPE OF CLAMPING	2	3	1	1	5	
CIRCUIT						
1 565 13-01 IN YOUR PRESENT JOB, DO YOU WORK ON EQUIPMENT WHICH CONTAINS ELECTRON TUBES	4	4	3	3	7	ELECTRON TUBES
1 566 13-02 DO YOU CHECK ELECTRON TUBES TO SEE IF THEY ARE GOOD	1	2	0	0	3	
1 567 13-03 DO YOU USE TUBE TESTERS TO CHECK ELECTRON TUBES	1	1	0	0	2	
1 568 13-04 DO YOU USE MULTIMETERS TO CHECK ELECTRON TUBES	1	1	0	0	2	
1 569 13-05 DO YOU USE SCOPES TO CHECK ELECTRON TUBES	1	1	0	0	2	
1 570 13-06 DO YOU USE SUBSTITUTION TO CHECK ELECTRON TUBES	1	1	0	0	2	
1 571 13-07 DO YOU USE OR REFER TO CUTOFF	1	1	0	0	2	
1 572 13-08 DO YOU USE OR REFER TO PEAK INVERSE VOLTAGE RATING	1	1	0	0	2	
1 573 13-09 DO YOU USE OR REFER TO PEAK CURRENT RATING	1	1	0	0	2	
1 574 13-10 DO YOU USE OR REFER TO TRANSIT TIME	1	1	0	0	2	
1 575 13-11 DO YOU USE OR REFER TO PLATE DISSIPATION RATING	1	1	0	0	2	
1 576 13-12 DO YOU USE OR REFER TO SATURATION	1	1	0	0	2	
1 577 13-13 DO YOU USE OR REFER TO DC PLATE RESISTANCE	1	1	0	0	2	
1 578 13-14 DO YOU COMPUTE ACTUAL VALUES OF THE DC PLATE RESISTANCE FOR ELECTRON TUBES	1	1	0	0	2	
1 579 13-15 DO YOU USE OR REFER TO PLATE VOLTAGE	1	2	0	0	3	
1 580 13-16 DO YOU USE OR REFER TO PLATE CURRENT	1	2	0	0	3	
1 581 13-17 DO YOU USE OR REFER TO GRID VOLTAGE	1	2	0	0	3	
1 582 13-18 DO YOU USE OR REFER TO GRID CURRENT	1	2	0	0	3	
1 583 13-19 DO YOU USE OR REFER TO CATHODE VOLTAGE	1	2	0	0	3	
1 584 13-20 DO YOU USE OR REFER TO CATHODE CURRENT	1	2	0	0	3	
1 585 13-21 DO YOU USE OR REFER TO THE TRIODE AMPLIFICATION FACTOR (THE AMPLIFICATION FACTOR FOR TRIODES IS DEFINED AS	1	1	0	0	2	

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

	DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
586	13-22 DO YOU CALCULATE ACTUAL VALUES OF TRIODE AMPLIFICATION FACTORS	1	1	0	0	2
587	13-23 DO YOU USE OR REFER TO MULTIGRID (TETRODE, PENTODE, ETC) AMPLIFICATION FACTORS	1	1	0	0	2
588	13-24 DO YOU USE OR REFER TO ELECTRON TUBE TRANSCONDUCTANCE (G, WHICH IS MEASURED IN MHOS)	1	2	0	0	3
589	13-25 DO YOU CALCULATE ACTUAL VALUES OF ELECTRON TUBE TRANSCONDUCTANCES	1	1	0	0	3
590	13-26 DO YOU USE OR REFER TO THE ELECTRON TUBE PARAMETER CALLED AC PLATE RESISTANCE	1	1	0	0	2
591	13-27 DO YOU CALCULATE ACTUAL VALUES OF AC PLATE RESISTANCE	1	1	0	0	2
592	13-28 DO YOU USE OR REFER TO ELECTRON TUBE INTERELECTRODE CAPACITANCE	1	1	0	0	2
593	13-29 DO YOU USE OR REFER TO CHARACTERISTIC CURVES IN YOUR WORK WITH ELECTRON TUBES	1	2	0	0	3
594	13-30 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE VOLTAGE FOR A SPECIFIED BIAS	1	1	0	0	2
595	13-31 DO YOU USE CHARACTERISTIC CURVES TO SELECT PLATE CURRENT FOR A SPECIFIED BIAS	1	1	0	0	2
596	13-32 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR CUTOFF	1	1	0	0	2
597	13-33 DO YOU USE CHARACTERISTIC CURVES TO SELECT BIAS REQUIRED FOR SATURATION	1	1	0	0	2
598	13-34 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER GAIN	1	2	0	0	4
599	13-35 DO YOU USE OR REFER TO ELECTRON TUBE AMPLIFIER EFFICIENCY	1	2	0	0	3
600	13-36 DO YOU USE TEST TUBE CHECKERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	0	1	0	0	1
601	13-37 DO YOU USE MULTIMETERS TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	1	1	0	0	2
602	13-38 DO YOU USE OSCILLOSCOPES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	1	2	0	0	3
603	13-39 DO YOU USE CHARACTERISTIC CURVES TO DETERMINE ELECTRON TUBE AMPLIFIER GAIN	1	2	0	0	3
604	13-40 DO YOU CALCULATE ANY ELECTRON TUBE CAPACITANCES SUCH AS INPUT CAPACITANCE	0	1	0	0	1
605	13-41 DO YOU USE OR REFER TO TUBE SOCKET NOTATION	1	1	0	0	3
606	13-42 DO YOU USE OR REFER TO PIN NUMBERING SYSTEMS	1	2	0	0	3
607	13-43 DO YOU USE OR REFER TO THE TYPE OF MATERIAL OR THE OPERATING TEMPERATURE OF THE EMITTING SURFACE IN THE	1	1	0	0	2
608	13-44 DO YOU USE OR REFER TO TUBE SUBSTITUTION MATERIAL SUCH AS MANUALS OR CHARTS	1	2	0	0	3
609	J1-01 DO YOU WORK WITH ELECTRON TUBE AMPLIFIERS OR CIRCUITS IN YOUR PRESENT JOB	3	3	3	2	5
610	J1-02 DO YOU DETERMINE THE CLASS OF OPERATION FOR ELECTRON TUBE AMPLIFIERS IN ORDER TO TROUBLESHOOT AMPLIFIER	1	1	0	0	3

ELECTRON TUBE AMPLIFIERS
AND CIRCUITS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
G 011 J1-03 DO YOU TROUBLESHOOT OR REPAIR PARAPHASE AMPLIFIERS	1	1	0	0	3	
G 012 J1-04 DO YOU TROUBLESHOOT OR REPAIR PUSH-PULL AMPLIFIERS	1	1	0	0	3	
G 013 J1-05 DO YOU TROUBLESHOOT OR REPAIR COMPOUND-CONNECTED	1	1	0	0	1	
G 014 J1-06 DO YOU TROUBLESHOOT OR REPAIR CASCADE-CONNECTED AMPLIFIERS	1	1	0	1	1	
G 015 J1-07 DO YOU TROUBLESHOOT OR REPAIR DON'T KNOW WHICH TYPE OF AMPLIFIER	1	2	1	1	3	
J 016 J2-01 DO YOU WORK WITH GAS TUBES (NOT CATHODE OR COLD CATHODE)	2	2	1	1	4	
J 017 J2-02 DO YOU WORK WITH CATHODE-RAY TUBES	8	8	8	6	11	SPECIAL PURPOSE ELECTRON TUBES
J 018 J2-03 DO YOU USE OR REFER TO THE CHARACTERISTICS OF BEAM POWER TUBES	1	1	0	0	2	
J 019 J2-04 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH BEAM POWER TUBES ARE USED	1	1	0	0	2	
J 020 J2-05 DO YOU USE OR REFER TO THE CHARACTERISTICS OF THYRATRONS	1	2	0	0	3	
J 021 J2-06 DO YOU TROUBLESHOOT OR REPAIR CIRCUITS IN WHICH THYRATRONS ARE USED	1	2	0	0	3	
J 022 J2-07 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTRON GUNS OF CATHODE-RAY TUBES (CRT)	3	2	3	2	5	
J 023 J2-08 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTROMAGNETIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES	2	2	2	1	4	
J 024 J2-09 DO YOU USE OR REFER TO THE PRINCIPLES OF OPERATION OF ELECTROSTATIC DEFLECTION SYSTEMS OF CATHODE-RAY TUBES	2	2	1	1	4	
J 025 J2-10 DO YOU USE OR REFER TO PHOSPHOR SCREENS	4	4	4	2	7	
J 026 J2-11 DO YOU USE OR REFER TO AQUADAG COATINGS	1	2	2	1	3	
J 027 J2-12 DO YOU USE OR REFER TO ELECTRON OPTICS	1	2	0	0	3	
J 028 J2-13 DO YOU USE OR REFER TO PERSISTENCE	2	3	1	1	5	
J 029 J2-14 DO YOU USE OR REFER TO DECAY TIMES	2	3	2	1	4	
J 030 J2-15 DO YOU USE OR REFER TO FLUORESCENCE	3	3	2	1	7	
J 031 J2-16 DO YOU USE OR REFER TO PHOSPHORESCENCE	3	3	2	1	6	
J 032 J3-01 DO YOU WORK ON TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	39	39	38	36	47	
J 033 J3-02 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS	13	15	11	10	21	
J 034 J3-03 DO YOU PERFORM TASKS ON FREQUENCY MIXERS	8	8	7	6	13	HETERODYNING, MODULATION, AND DEMODULATION
J 035 J3-04 DO YOU USE OR REFER TO THE HETERODYNING OF SIGNALS IN YOUR WORK WITH TRANSMIT OR RECEIVE SYSTEMS	14	13	14	11	20	
J 036 J3-05 DO YOU PERFORM TASKS ON REACTANCE MODULATORS	2	4	0	0	7	
J 037 J3-06 DO YOU PERFORM TASKS ON MODULATED OSCILLATORS	5	7	2	3	11	
K 038 K1-01 DO YOU WORK ON AM TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	16	20	11	14	21	
K 039 K1-02 DO YOU INSPECT AM TRANSMIT OR RECEIVE SYSTEMS	5	6	2	2	11	
K 040 K1-03 DO YOU CLEAN AM TRANSMIT OR RECEIVE SYSTEMS	1	1	0	0	2	AM SYSTEMS
K 041 K1-04 DO YOU ALIGN OR ADJUST AM TRANSMIT OR RECEIVE SYSTEMS	3	5	1	1	9	

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

Task		SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
K 642	K1-05 DO YOU TROUBLESHOOT IO AM TRANSMIT OR RECEIVE SYSTEMS	15	19	10	12	23
K 643	K1-06 DO YOU TROUBLESHOOT TO AM TRANSMIT OR RECEIVE COMPONENTS	3	5	1	1	9
K 644	K1-07 DO YOU REMOVE OR REPLACE AM TRANSMIT OR RECEIVE SYSTEMS	4	6	3	3	8
K 645	K1-08 DO YOU REMOVE OR REPLACE AM TRANSMIT OR RECEIVE COMPONENTS	1	2	0	0	4
K 646	K1-09 DO YOU PERFORM TASKS ON RF OSCILLATORS	3	3	1	1	7
K 647	K1-10 DO YOU PERFORM TASKS ON RF AMPLIFIERS	3	2	1	1	7
K 648	K1-11 DO YOU PERFORM TASKS ON AUDIO AMPLIFIERS	7	10	3	5	12
K 649	K1-12 DO YOU PERFORM TASKS ON POWER AMPLIFIERS	3	4	2	5	7
K 650	K1-13 DO YOU PERFORM TASKS ON LOCAL OSCILLATORS	5	7	4	4	9
K 651	K1-14 DO YOU PERFORM TASKS ON IF AMPLIFIERS	2	3	1	1	7
K 652	K1-15 DO YOU PERFORM TASKS ON DETECTORS	2	3	0	0	6
K 653	K1-16 DO YOU PERFORM TASKS ON DON'T REMEMBER WHICH AM STAGE	3	6	0	2	5
K 654	K1-17 DO YOU USE OR REFER TO AMPLITUDE STABILIZATION IN TRANSMITTERS	6	8	3	5	9
K 655	K1-18 DO YOU USE OR REFER TO FREQUENCY STABILIZATION IN TRANSMITTERS	8	11	5	7	11
K 656	K1-19 DO YOU USE OR REFER TO SENSITIVITY OF RECEIVERS	10	13	7	8	17
K 657	K1-20 DO YOU USE OR REFER TO SELECTIVITY OF RECEIVERS	9	11	6	7	16
K 658	K1-21 DO YOU USE OR REFER TO 2ND HARMONIC DISTORTION	6	7	4	4	11
K 659	K1-22 DO YOU USE OR REFER TO BANDPASS DISTORTION	6	8	4	5	10
K 660	K1-23 DO YOU USE OR REFER TO SQUARE LAW DISTORTION	1	2	0	0	5
K 661	K1-24 DO YOU USE OR REFER TO CO-CHANNEL INTERFERENCE	7	10	3	6	11
K 662	K1-25 DO YOU USE OR REFER TO IMAGE FREQUENCIES IN RECEIVERS	2	2	0	0	5
K 663	K1-26 DO YOU USE OR REFER TO SIGNAL TO IMAGE RATIOS OR IMAGE REJECTION RATIOS	2	3	1	1	6
K 664	K1-27 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM TRANSMITTER SCHEMATIC DIAGRAMS	3	3	2	2	5
K 665	K1-28 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH AM RECEIVER SCHEMATIC DIAGRAMS	3	3	2	2	5
K 666	K2-01 DO YOU WORK WITH FM TRANSMIT OR RECEIVE SYSTEMS IN YOUR PRESENT JOB	27	24	32	27	30
K 667	K2-02 DO YOU INSPECT FM TRANSMIT OR RECEIVE SYSTEMS	7	6	8	6	9
K 668	K2-03 DO YOU CLEAN FM TRANSMIT OR RECEIVE SYSTEMS	1	1	0	3	3
K 669	K2-04 DO YOU ALIGN FM TRANSMIT OR RECEIVE SYSTEMS	5	5	4	3	9
K 670	K2-05 DO YOU TROUBLESHOOT TO FM TRANSMIT OR RECEIVE SYSTEMS	26	23	29	25	28
K 671	K2-06 DO YOU TROUBLESHOOT TO FM TRANSMIT OR RECEIVE COMPONENTS	6	5	9	6	8
K 672	K2-07 DO YOU REMOVE OR REPLACE FM TRANSMIT OR RECEIVE SYSTEMS	5	6	4	3	9
K 673	K2-08 DO YOU REMOVE OR REPLACE FM TRANSMIT OR RECEIVE COMPONENTS	2	2	2	1	4
K 674	K2-09 DO YOU PERFORM TASKS ON AUDIO AMPLIFIERS	7	8	6	6	11
K 675	K2-10 DO YOU PERFORM TASKS ON FREQUENCY MULTIPLIERS	3	5	1	1	8

FM SYSTEMS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
K 676 K2-11 DO YOU PERFORM TASKS ON DRIVERS (INTERMEDIATE AMPLIFIERS)	2	3	0	0	7
K 677 K2-12 DO YOU PERFORM TASKS ON POWER AMPLIFIERS	3	5	2	2	7
K 678 K2-13 DO YOU PERFORM TASKS ON RF AMPLIFIERS	3	4	2	2	7
K 679 K2-14 DO YOU PERFORM TASKS ON FREQUENCY CONVERTERS	5	8	2	3	11
K 680 K2-15 DO YOU PERFORM TASKS ON IF AMPLIFIERS	3	2	2	1	7
K 681 K2-16 DO YOU PERFORM TASKS ON LIMITERS	2	3	1	1	6
K 682 K2-17 DO YOU PERFORM TASKS ON FREQUENCY DISCRIMINATORS	3	3	1	1	7
K 683 K2-18 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM TRANSMITTERS	5	9	5	4	5
K 684 K2-19 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SCHEMATIC DIAGRAMS OF FM RECEIVERS	5	4	5	4	5
K 685 K3-01 DO YOU CONVERT DECIMAL (BASE 10) NUMBERS TO OCTAL (BASE 8) NUMBERS	3	3	2	2	5
K 686 K3-02 DO YOU CONVERT DECIMAL NUMBERS TO BINARY (BASE 2) NUMBERS	5	6	2	2	11
K 687 K3-03 DO YOU CONVERT OCTAL NUMBERS TO DECIMAL NUMBERS	2	3	1	1	5
K 688 K3-04 DO YOU CONVERT OCTAL NUMBERS TO BINARY NUMBERS	2	2	1	1	3
K 689 K3-05 DO YOU CONVERT BINARY NUMBERS TO DECIMAL NUMBERS	5	7	2	2	11
K 690 K3-06 DO YOU CONVERT BINARY NUMBERS TO OCTAL NUMBERS	2	2	1	1	5
K 691 K3-07 DO YOU ADD BINARY NUMBERS TO GET A SUM	6	8	4	3	12
K 692 K3-08 DO YOU SUBTRACT BINARY NUMBERS USING THE END-AROUND- CARRY METHOD	2	3	0	1	6
K 693 K3-09 DO YOU SUBTRACT BINARY NUMBERS USING THE DIRECT SUBTRACTION METHOD	4	5	2	2	8
K 694 K3-10 DO YOU ADD OCTAL NUMBERS TO GET A SUM	2	2	0	1	3
L 695 L1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS RELATING TO LOGIC FUNCTIONS	2	2	1	1	2
L 696 L1-02 DO YOU CONSTRUCT TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES	0	1	0	0	1
L 697 L1-03 DO YOU CONSTRUCT TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES	0	1	0	0	1
L 698 L1-04 DO YOU CONSTRUCT TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS	0	1	0	0	1
L 699 L1-05 DO YOU CONSTRUCT TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS OR GATES	0	1	0	0	1
L 700 L1-06 DO YOU USE OR REFER TO TRUTH TABLES FOR AND LOGIC SYMBOLS OR GATES	0	1	0	0	1
L 701 L1-07 DO YOU USE OR REFER TO TRUTH TABLES FOR OR LOGIC SYMBOLS OR GATES	1	1	0	0	1
L 702 L1-08 DO YOU USE OR REFER TO TRUTH TABLES FOR AND OR OR LOGIC SYMBOLS WITH STATE INDICATORS	0	1	0	0	1
L 703 L1-09 DO YOU USE OR REFER TO TRUTH TABLES FOR EXCLUSIVE OR LOGIC SYMBOLS	0	1	0	0	1
L 704 L1-10 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR AND GATES	1	1	0	0	2
L 705 L1-11 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR OR GATES	0	1	0	0	1
L 706 L1-12 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR NAND OR NOR GATES	0	1	0	0	0

NUMBERING SYSTEMS

LOGIC FUNCTIONS

AF HUMAN RESOURCES LABORATORY
AIR FORCE SYSTEMS COMMAND

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DI-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
L 707 L1-13 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR EXCLUSIVE OR GATES	1	1	0	0	1
L 708 L2-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS RELATING TO BOOLEAN EQUATIONS, LOGIC DIAGRAMS, OR LOGIC	0	0	0	0	0
L 709 L2-02 DO YOU DRAW LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUITS	0	1	0	0	1
L 710 L2-03 DO YOU CONSTRUCT TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS	0	1	0	0	1
L 711 L2-04 DO YOU DRAW LOGIC DIAGRAMS FROM GIVEN BOOLEAN EQUATIONS	0	1	0	0	1
L 712 L2-05 DO YOU MEASURE INPUTS OR OUTPUTS OF LOGIC GATES	0	1	0	0	1
L 713 L2-06 DO YOU DEVELOP OR ANALYZE BOOLEAN EQUATIONS IN THE PROCESS OF TROUBLESHOOTING DIGITAL CIRCUITS	0	0	0	0	1
L 714 L2-07 DO YOU ANALYZE LOGIC CIRCUITS BY USING BOOLEAN ALGEBRA	0	1	0	0	1
L 715 L2-08 DO YOU USE OR REFER TO LOGIC SYMBOLS FOR DIRECT COUPLED TRANSISTOR LOGIC (DCTL) CIRCUIT GATES	0	1	0	0	1
L 716 L2-09 DO YOU USE OR REFER TO TRUTH TABLES FOR CURRENT MODE LOGIC (CML) CIRCUITS	0	1	0	0	1
L 717 L2-10 DO YOU USE OR REFER TO LOGIC DIAGRAMS CONSISTING OF MORE THAN ONE GATE	0	1	0	0	1
L 718 L2-11 DO YOU COMPUTE SUM AND CARRY EXPRESSIONS FOR SERIAL HALF OR FULL ADDER LOGIC DIAGRAMS	0	1	0	0	1
L 719 L2-12 DO YOU TRACE DATA FLOW THROUGH PARALLEL FULL ADDER LOGIC DIAGRAMS	0	1	0	0	1
L 720 L2-13 DO YOU WORK WITH ASTABLE (FREE RUNNING) MULTIVIBRATORS	0	0	0	0	1
L 721 L2-14 DO YOU WORK WITH BISTABLE (FLIP-FLOP) MULTIVIBRATORS	0	1	0	0	1
L 722 L2-15 DO YOU WORK WITH MONOSTABLE (ONE-SHOT) MULTIVIBRATORS	0	1	0	0	1
L 723 L2-16 DO YOU USE OR REFER TO FLIP-FLOP MULTIVIBRATOR SYMBOLS	0	1	0	0	1
L 724 L2-17 DO YOU USE OR REFER TO SINGLE-SHOT MULTIVIBRATOR SYMBOLS	0	1	0	0	1
L 725 L2-18 DO YOU USE OR REFER TO FLIP-FLOP CIRCUIT DIAGRAMS	0	1	0	0	1
L 726 L2-19 DO YOU USE OR REFER TO FLIP-FLOP TRUTH TABLES	0	1	0	0	1
L 727 L2-20 DO YOU USE OR REFER TO COMPLEMENTED FLIP-FLOP LOGIC SYMBOLS	0	1	0	0	1
L 728 L2-21 DO YOU USE OR REFER TO COMPLEMENTING FLIP-FLOP LOGIC SYMBOLS	0	1	0	0	1
L 729 L2-22 DO YOU MEASURE OUTPUT WAVESHAPES OF LOGIC CIRCUITS	0	1	0	0	1
L 730 L2-23 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTED FLIP-FLOP SCHEMATIC DIAGRAMS	0	1	0	0	1
L 731 L2-24 DO YOU TRACE DATA FLOW THROUGH COMPLEMENTING FLIP-FLOP SCHEMATIC DIAGRAMS	0	1	0	0	1
L 732 L2-25 DO YOU CONSTRUCT TRUTH TABLES FOR J-K FLIP-FLOP LOGIC SYMBOLS	0	1	0	0	1

BOOLEAN EQUATIONS

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
733 L3-01 DO YOU WORK WITH DIGITAL COUNTERS IN YOUR PRESENT JOB	22	25	19	21	24
734 L3-02 DO YOU USE OR REFER TO UP-COUNTERS	5	7	2	3	10
735 L3-03 DO YOU USE OR REFER TO DOWN-COUNTERS	3	9	1	1	8
736 L3-04 DO YOU USE OR REFER TO SERIAL COUNTERS	4	6	2	2	8
737 L3-05 DO YOU USE OR REFER TO PARALLEL COUNTERS	2	3	1	1	5
738 L3-06 DO YOU USE OR REFER TO RING COUNTERS	2	2	0	0	3
739 L3-07 DO YOU USE OR REFER TO DECADE COUNTERS	6	8	3	4	9
740 L3-08 DO YOU USE OR REFER TO COUNT DETECT CIRCUITS	4	3	5	3	6
741 L3-09 DO YOU USE OR REFER TO DOWN CLOCKS	2	2	1	1	3
742 L3-10 DO YOU USE OR REFER TO UP CLOCKS	2	2	1	1	4
743 L3-11 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS	2	1	0	0	2
744 L3-12 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENTING FLIP-	1	1	0	0	1
745 L3-13 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF DECADE COUNTERS	2	3	0	0	5
746 L3-14 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF RING COUNTERS	1	1	0	0	2
747 L3-15 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SERIAL UP-COUNTERS FEEDING A PARALLEL STORAGE REGISTER	1	2	0	0	3
748 L3-16 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS	1	1	0	0	1
749 L3-17 DO YOU TRACE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF COUNTERS	3	4	2	3	5
750 L3-18 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR UP-COUNTERS HAVING COMPLEMENTED FLIP-FLOPS	1	1	0	0	3
751 L3-19 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR SERIAL UP- OR DOWN-COUNTERS HAVING COMPLEMENT-	1	1	0	0	2
752 L3-20 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR SERIAL UP-COUNTERS FEEDING A PARALLEL STORAGE	1	1	0	0	2
753 L3-21 DO YOU COMPUTE THE BINARY COUNT AFTER SPECIFIC INPUT PULSES FOR OTHER TYPES OF COUNTERS	2	2	1	1	3
754 L3-22 DO YOU CONSTRUCT TRUTH TABLES FROM LOGIC DIAGRAMS OF DECADE COUNTERS	1	1	0	0	1
755 L3-23 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP IN RING COUNTERS FOR SPECIFIC INPUT PULSES	0	1	0	0	1
756 L3-24 DO YOU DETERMINE THE APPROPRIATE AND GATE NECESSARY IN COUNT DETECT CIRCUITS TO INDICATE A REQUIRED COUNT	1	1	1	0	2
757 M1-01 DO YOU WORK WITH SAWTOOTH WAVE GENERATORS	6	8	4	3	19
758 M1-02 DO YOU WORK WITH TRAPEZOIDAL WAVE GENERATORS	4	7	1	1	12
759 M1-03 DO YOU WORK WITH PULSED OSCILLATORS WITH REGENERATIVE FEEDBACK	3	5	2	2	7
760 M1-04 DO YOU WORK WITH PULSED OSCILLATORS WITHOUT REGENERATIVE FEEDBACK	3	4	2	1	8

COUNTERS

TIMING CIRCUITS

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK			SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
M 761	M1-05	DO YOU WORK WITH BLOCKING OSCILLATORS	3	4	1	1	7
M 762	M1-06	DO YOU USE OR REFER TO RISE TIME	4	7	1	1	11
M 763	M1-07	DO YOU USE OR REFER TO FALL OR FLYBACK TIME	3	5	1	1	8
M 764	M1-08	DO YOU USE OR REFER TO SWEEP TIME	17	18	16	14	27
M 765	M1-09	DO YOU USE OR REFER TO ELECTRICAL LENGTH OF SAWTOOTH WAVEFORMS	4	6	1	1	11
M 766	M1-10	DO YOU USE OR REFER TO PHYSICAL LENGTH OF SAWTOOTH WAVEFORMS	3	5	1	1	10
M 767	M1-11	DO YOU USE OR REFER TO LINEAR SLOPE OF SAWTOOTH WAVEFORMS	2	3	2	1	7
M 768	M1-12	DO YOU USE OR REFER TO GATE LENGTH OF SAWTOOTH WAVEFORMS	3	5	0	0	9
M 769	M2-01	DO YOU USE SIGNAL GENERATORS IN YOUR PRESENT JOB	64	62	68	63	67
M 770	M2-02	DO YOU PERFORM OPERATIONAL CHECKS WHILE USING SIGNAL GENERATORS	56	55	57	54	60
M 771	M2-03	DO YOU PERFORM PERIODIC MAINTENANCE SUCH AS ADJUSTING, ALIGNING, OR CALIBRATING WHILE USING SIGNAL GENERATORS	19	16	24	19	20
M 772	M2-04	DO YOU TROUBLESHOOT TO AN ASSEMBLY OR SUBASSEMBLY WHILE USING SIGNAL GENERATORS	14	12	16	12	17
M 773	M2-05	DO YOU TROUBLESHOOT TO THE SMALLEST REPLACEABLE COMPONENT WHILE USING SIGNAL GENERATORS	2	3	1	1	5
M 774	M2-06	DO YOU USE AUDIO SINE-WAVE GENERATORS	55	50	61	53	57
M 775	M2-07	DO YOU USE AUDIO NON-SINUSOIDAL WAVE GENERATORS SUCH AS SQUARE WAVE, TRIANGLE, PULSE, OR SPIKE	13	16	10	10	21
M 776	M2-08	DO YOU USE RF GENERATORS LESS THAN 1,000 MH	13	15	10	10	21
M 777	M2-09	DO YOU USE RF GENERATORS GREATER THAN 1,000 MH	6	8	3	4	11
M 778	M2-10	DO YOU USE OTHER SPECIAL PURPOSE OR MULTIFUNCTION GENERATORS	27	31	22	23	36
M 779	M3-01	IN YOUR PRESENT JOB, DO YOU PERFORM ANY TASKS DEALING WITH ALTERNATING CURRENT OR DIRECT CURRENT MOTORS OR GENERATORS	2	3	1	2	3
M 780	M3-02	DO YOU INSPECT MOTORS	1	1	0	0	2
M 781	M3-03	DO YOU CLEAN OR LUBRICATE MOTORS	1	1	0	0	2
M 782	M3-04	DO YOU OPERATE MOTORS	1	1	0	1	2
M 783	M3-05	DO YOU REMOVE OR REPLACE COMPLETE MOTORS	0	1	0	0	1
M 784	M3-06	DO YOU REMOVE OR REPLACE MOTOR PARTS	0	1	0	0	1
M 785	M3-07	DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS OF MOTORS	1	1	0	0	2
M 786	M3-08	DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF MOTORS	0	1	0	0	1
M 787	M3-09	DO YOU PERFORM ANY TASKS ON FIELD COILS	1	1	0	0	2
M 788	M3-10	DO YOU PERFORM ANY TASKS ON ARMATURES	1	1	0	0	2
M 789	M3-11	DO YOU PERFORM ANY TASKS ON ROTORS	1	1	0	0	2
M 790	M3-12	DO YOU PERFORM ANY TASKS ON BRUSHES	1	1	0	0	2
M 791	M3-13	DO YOU PERFORM ANY TASKS ON SLIP RINGS	1	1	0	0	1
M 792	M3-14	DO YOU PERFORM ANY TASKS ON COMMUTATORS	0	0	0	0	1
M 793	M3-15	DO YOU PERFORM ANY TASKS ON POLE PIECES	0	1	0	0	1

USE OF SIGNAL GENERATORS

MOTORS AND GENERATORS

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

MY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
M 794 3-16 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OF THE FORCE OR TORQUE CREATED BY A MOTOR	0	1	0	0	1
M 795 3-17 DO YOU DETERMINE OR MEASURE THE DIRECTION OF THE MECHANICAL FORCE OR TORQUE CREATED BY A MOTOR	0	1	0	0	1
M 796 3-18 DO YOU DETERMINE OR MEASURE THE MAGNITUDE OR DIRECTION OF THE INDUCED VOLTAGE IN MOTORS	1	1	0	0	2
M 797 3-19 DO YOU WORK WITH SYNCHRONOUS MOTORS	1	0	0	0	2
M 798 3-20 DO YOU WORK WITH INDUCTION MOTORS	1	0	0	0	2
M 799 3-21 DO YOU WORK WITH SPLIT-PHASE MOTORS	0	1	0	0	1
M 800 3-22 DO YOU WORK WITH SOME COMBINATION OF THE ABOVE MOTORS	1	1	1	1	2
M 801 3-23 DO YOU INSPECT GENERATORS	1	1	0	1	2
M 802 3-24 DO YOU CLEAN OR LUBRICATE GENERATORS	2	2	1	2	2
M 803 3-25 DO YOU OPERATE GENERATORS	0	1	0	0	1
M 804 3-26 DO YOU REMOVE OR REPLACE COMPLETE GENERATORS	1	0	0	0	1
M 805 3-27 DO YOU REMOVE OR REPLACE GENERATOR PARTS	1	1	1	0	2
M 806 3-28 DO YOU TROUBLESHOOT AS FAR AS CHECKING WIRE CONNECTIONS OF GENERATORS					
M 807 3-29 DO YOU TROUBLESHOOT DOWN TO COMPONENT PARTS OF GENERATORS	0	0	0	0	1
N 808 N1-01 DO YOU WORK WITH METERS IN YOUR PRESENT JOB	75	73	76	73	79
N 809 N1-02 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF PERMANENT MAGNETS	7	6	8	6	8
N 810 N1-03 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF MOVING COILS	8	6	10	8	8
N 811 N1-04 DO YOU CONCEPTUALIZE OR CONSIDER THE FUNCTIONS OF SPIRAL SPRINGS	7	7	8	7	9
N 812 N1-05 DO YOU READ METER SCALES	75	73	77	74	79
N 813 N1-06 DO YOU EXTEND THE RANGE OF AMMETERS	21	24	16	17	30
N 814 N1-07 DO YOU ZERO OHMMETERS	33	30	38	31	39
N 815 N1-08 DO YOU ZERO AMMETERS	22	23	20	18	30
N 816 N1-09 DO YOU EXTEND THE RANGE OF VOLTMETERS	30	30	29	27	37
N 817 N1-10 DO YOU USE OR REFER TO VOLTMETER SENSITIVITY (EXPRESSED IN UNITS OF OHMS PER VOLT)	17	15	20	16	20
N 818 N2-1 DO YOU WORK WITH SATURABLE REACTORS OR MAGNETIC AMPLIFIERS IN YOUR PRESENT JOB	1	1	0	0	1
N 819 N2-2 DO YOU INSPECT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	1	0	0	1
N 820 N2-3 DO YOU CLEAN MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	0	0	0	1
N 821 N2-4 DO YOU ADJUST MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	1	1	0	0	2
N 822 N2-5 DO YOU TROUBLESHOOT MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	1	0	0	1
N 823 N2-6 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIERS OR SATURABLE REACTORS	0	0	0	0	1
N 824 N2-7 DO YOU REMOVE OR REPLACE MAGNETIC AMPLIFIER OR SATURABLE REACTOR COMPONENTS	0	0	0	0	1

METER MOVEMENTS

SATURABLE REACTORS AND MAGNETIC
AMPLIFIERS

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
N 825 42-08 DO YOU USE OR REFER TO HYSTERESIS CURVES OR LOOPS	0	0	0	0	1	
N 826 42-09 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS ACROSS REACTOR WINDINGS OR LOAD RESISTORS OF	0	1	0	0	1	
N 827 42-10 DO YOU MEASURE OUTPUT WAVEFORMS ACROSS REACTOR WINDINGS OR LOAD RESISTORS OF SINGLE WINDING SATURABLE	0	1	0	0	1	
N 828 42-11 DO YOU INTERPRET SCHEMATIC DRAWINGS TO DEVELOP OUTPUT WAVEFORMS FOR MAGNETIC AMPLIFIERS	1	1	0	0	1	
N 829 42-12 DO YOU USE OR REFER TO COERCIVE FORCE IN SATURABLE REACTORS	0	0	0	0	1	
N 830 42-13 DO YOU USE OR REFER TO RESIDUAL MAGNETISM IN SATURABLE REACTORS	0	0	0	0	1	
N 831 42-14 DO YOU USE OR REFER TO FLUX DENSITY IN SATURABLE REACTORS	0	1	0	0	1	
N 832 42-15 DO YOU USE OR REFER TO POINT OF SATURATION IN SATURABLE REACTORS	0	1	0	0	1	
N 833 42-16 DO YOU USE OR REFER TO SATURABLE REACTOR SCHEMATIC SYMBOLS	0	1	0	0	1	
N 834 N3-01 DO YOU WORK WITH WAVESHAPING CIRCUITS IN YOUR PRESENT JOB	5	8	2	2	14	WAVESHAPING CIRCUITS
N 835 N3-02 DO YOU USE OR REFER TO TRANSIENT INTERVALS	3	5	1	1	9	
N 836 N3-03 DO YOU USE OR REFER TO PULSE WIDTH (PW)	4	7	1	1	12	
N 837 N3-04 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)	3	4	1	1	7	
N 838 N3-05 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF)	3	4	1	1	8	
N 839 N3-06 DO YOU USE OR REFER TO DIFFERENTIATING CIRCUITS	1	2	0	0	4	
N 840 N3-07 DO YOU USE OR REFER TO INTEGRATING CIRCUITS	2	3	0	0	7	
N 841 N3-08 DO YOU USE OR REFER TO THE CLASSIFICATION OF TIME CONSTANTS (TC) AS LONG, MEDIUM, OR SHORT	2	3	0	0	7	
N 842 N3-09 DO YOU DETERMINE WHETHER AN L OR RC CIRCUIT IS DIFFERENTIATING OR INTEGRATING BASED ON THE TIME CONSTANT	1	1	0	0	2	
N 843 N3-10 DO YOU WORK WITH SQUARE WAVE GENERATORS	4	6	1	1	11	
N 844 N3-11 DO YOU WORK WITH RECTANGULAR WAVE GENERATORS	1	2	0	0	3	
O 845 O1-01 DO YOU WORK ON SINGLE SIDEBAND SYSTEMS IN YOUR PRESENT JOB	16	20	12	15	22	SINGLE SIDEBAND SYSTEMS
O 846 O1-02 DO YOU INSPECT SSB TRANSMIT OR RECEIVE SYSTEMS	6	9	2	5	10	
O 847 O1-03 DO YOU CLEAN SSB TRANSMIT OR RECEIVE SYSTEMS	1	2	0	0	3	
O 848 O1-04 DO YOU ALIGN SSB TRANSMIT OR RECEIVE SYSTEMS	3	6	0	1	9	
O 849 O1-05 DO YOU TROUBLESHOOT TO SSB TRANSMIT OR RECEIVE SYSTEMS	15	19	11	14	20	
O 850 O1-06 DO YOU TROUBLESHOOT TO SSB TRANSMIT OR RECEIVE COMPONENTS	4	5	2	3	7	
O 851 O1-07 DO YOU REMOVE OR REPLACE SSB TRANSMIT OR RECEIVE SYSTEMS	4	6	1	2	7	
O 852 O1-08 DO YOU REMOVE OR REPLACE SSB TRANSMIT OR RECEIVE COMPONENTS	1	1	0	0	2	

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
0 853 01-09 DO YOU PERFORM TASKS ON SSB AUDIO AMPLIFIERS	5	8	1	3	11
0 854 01-10 DO YOU PERFORM TASKS ON SSB BALANCED MODULATORS	2	3	0	0	6
0 855 01-11 DO YOU PERFORM TASKS ON SSB CARRIER OSCILLATORS	2	3	0	1	5
0 856 01-12 DO YOU PERFORM TASKS ON SSB LC FILTERS	1	2	0	0	3
0 857 01-13 DO YOU PERFORM TASKS ON SSB CRYSTAL FILTERS	1	2	0	0	4
0 858 01-14 DO YOU PERFORM TASKS ON SSB MECHANICAL FILTERS	1	2	0	0	3
0 859 01-15 DO YOU PERFORM TASKS ON SSB OSCILLATORS	3	5	1	0	8
0 860 01-16 DO YOU PERFORM TASKS ON SSB MIXERS	2	3	0	0	7
0 861 01-17 DO YOU PERFORM TASKS ON SSB DRIVERS	1	2	0	0	5
0 862 01-18 DO YOU PERFORM TASKS ON SSB POWER AMPLIFIERS	1	2	0	0	3
0 863 01-19 DO YOU PERFORM TASKS ON SSB RF AMPLIFIERS	2	3	0	1	5
0 864 01-20 DO YOU PERFORM TASKS ON SSB FREQUENCY CONVERTERS	3	6	0	2	7
0 865 01-21 DO YOU PERFORM TASKS ON SSB IF AMPLIFIERS	2	3	0	1	5
0 866 01-22 DO YOU PERFORM TASKS ON SSB DEMODULATORS	3	5	1	1	9
0 867 01-23 DO YOU PERFORM TASKS ON SSB DON'T REMEMBER WHICH SSB	3	5	0	2	5
SYSTEM STAGES					
0 868 01-24 DO YOU USE OR REFER TO SELECTIVE FADING	8	10	6	6	14
0 869 01-25 DO YOU USE OR REFER TO PEAK POWER	7	8	6	5	12
0 870 01-26 DO YOU USE OR REFER TO FREQUENCY STABILITY	10	11	8	8	15
0 871 01-27 DO YOU USE OR REFER TO RESPONSE CURVES FOR BANDWIDTH FILTERS	5	6	3	3	9
0 872 01-28 DO YOU CALCULATE PEAK POWER OR EFFECTIVE POWER OF SSB TRANSMITTERS	2	3	1	1	4
0 873 01-29 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB TRANSMITTER SCHEMATIC DIAGRAMS	2	2	1	1	4
0 874 01-30 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH SSB RECEIVER SCHEMATIC DIAGRAMS	2	2	2	1	4
0 875 02-01 DO YOU WORK ON PULSE MODULATION SYSTEMS IN YOUR PRESENT JOB	6	7	3	4	10
0 876 02-02 DO YOU INSPECT PULSE MODULATION SYSTEMS	2	3	0	1	5
0 877 02-03 DO YOU CLEAN PULSE MODULATION SYSTEMS	1	1	0	0	2
0 878 02-04 DO YOU ALIGN PULSE MODULATION SYSTEMS	2	2	1	0	3
0 879 02-05 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEMS	4	6	1	3	8
0 880 02-06 DO YOU TROUBLESHOOT TO PULSE MODULATION SYSTEM COMPONENTS	1	2	0	0	4
0 881 02-07 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEMS	1	1	0	0	3
0 882 02-08 DO YOU REMOVE OR REPLACE PULSE MODULATION SYSTEM COMPONENTS	1	1	0	0	2
0 883 02-09 DO YOU WORK ON PULSE-AMPLITUDE MODULATION (PAM) SYSTEMS	3	5	1	1	9
0 884 02-10 DO YOU WORK ON PULSE-DURATION MODULATION (PDM) SYSTEMS	2	3	0	0	6
0 885 02-11 DO YOU WORK ON PULSE-POSITION MODULATION (PPM) SYSTEMS	3	5	0	1	9
0 886 02-12 DO YOU WORK ON PULSE-CODE MODULATION (PCM) SYSTEMS	4	7	1	2	9
0 887 02-13 DO YOU WORK ON LINE PULSING MODULATION SYSTEMS	1	1	0	1	2
0 888 02-14 DO YOU WORK ON DON'T REMEMBER WHICH TYPE OF MODULATION SYSTEM	1	1	0	0	2

PULSE MODULATION SYSTEMS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DT-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
0 889 02-15 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER SUPPLIES	1	2	0	0	4
0 890 02-16 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM CHARGING CHOKES AND CHARGING DIODES	1	1	0	0	3
0 891 02-17 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE FORMING NETWORKS	1	2	0	0	4
0 892 02-18 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TIMERS	1	2	0	0	4
0 893 02-19 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM SWITCHES SUCH AS GAS THYRATRONS	0	1	0	0	1
0 894 02-20 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM PULSE TRANSFORMERS	1	2	0	0	4
0 895 02-21 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM TRANSMITTER TUBES	1	1	0	0	3
0 896 02-22 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM RF AMPLIFIERS	1	2	0	0	4
0 897 02-23 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM FREQUENCY CONVERTERS	2	3	0	0	5
0 898 02-24 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM IF AMPLIFIERS	1	2	0	1	5
0 899 02-25 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM DETECTORS	2	3	0	1	5
0 900 02-26 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM VIDEO AMPLIFIERS	1	1	0	0	3
0 901 02-27 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM POWER VIDEO AMPLIFIERS	1	1	0	0	3
0 902 02-28 DO YOU PERFORM TASKS ON PULSE MODULATION SYSTEM STAGES DON'T REMEMBER WHICH PULSE MODULATION SYSTEM	1	2	0	0	3
0 903 02-29 DO YOU USE OR REFER TO PULSE RECURRENCE FREQUENCY (PRF)	2	3	0	0	6
0 904 02-30 DO YOU USE OR REFER TO PULSE RECURRENCE TIME (PRT)	2	3	0	1	6
0 905 02-31 DO YOU USE OR REFER TO PULSE WIDTH (PW)	3	5	1	1	9
0 906 02-32 DO YOU USE OR REFER TO PULSE SHAPE	3	5	0	1	7
0 907 02-33 DO YOU USE OR REFER TO PEAK POWER	2	3	1	1	6
0 908 02-34 DO YOU USE OR REFER TO AVERAGE POWER	3	4	1	1	7
0 909 02-35 DO YOU CALCULATE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF)	1	1	0	0	3
0 910 02-36 DO YOU MEASURE PULSE RECURRENCE TIME (PRT) OR PULSE RECURRENCE FREQUENCY (PRF)	1	1	1	1	3
0 911 02-37 DO YOU USE FORMULAS TO CALCULATE AVERAGE POWER OR PEAK POWER OF PULSE MODULATION TRANSMIT SYSTEMS	2	3	1	1	4
0 912 02-38 DO YOU TRACE SIGNALS OR CURRENT PATHS THROUGH PULSE MODULATION TRANSMITTER SCHEMATIC DIAGRAMS	1	2	0	0	4
0 913 02-39 DO YOU TRACE SIGNALS OF CURRENT PATHS THROUGH PULSE MODULATION RECEIVER SCHEMATIC DIAGRAMS	2	2	0	1	4
0 914 03-01 DO YOU WORK WITH ANTENNAS IN YOUR PRESENT JOB	13	16	11	11	20
0 915 03-02 DO YOU INSPECT ANTENNAS	4	6	0	1	9

ANTENNAS

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DI-TSK		SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
0 916	03-03 DO YOU CLEAN ANTENNAS	1	1	0	0	2
0 917	03-04 DO YOU PHYSICALLY ALIGN ANTENNAS	2	3	0	1	3
0 918	03-05 DO YOU ELECTRICALLY ALIGN ANTENNAS	2	2	1	1	4
0 919	03-06 DO YOU TROUBLESHOOT TO ANTENNAS	7	7	7	6	9
0 920	03-07 DO YOU TROUBLESHOOT TO ANTENNA COMPONENTS	1	2	0	1	3
0 921	03-08 DO YOU REMOVE OR INSTALL ANTENNAS	4	7	0	2	9
0 922	03-09 DO YOU REMOVE OR REPLACE COMPONENTS OF ANTENNAS	1	2	0	1	3
0 923	03-10 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF E OR ELECTRIC FIELD LINES	3	5	0	0	8
0 924	03-11 DO YOU USE OR REFER TO TECHNICAL DATA CONTAINING REPRESENTATIONS OF H OR MAGNETIC FIELD LINES	2	4	0	0	8
0 925	03-12 DO YOU DETERMINE THE DIRECTION OF THE MAGNETIC LINES IN RELATION TO THE ELECTRIC LINES OF FORCE FOR ANTENNAS	2	3	0	0	7
0 926	03-13 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE OF CORRECT LENGTH (HALF-WAVE) ACT AS	1	2	0	0	3
0 927	03-14 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE LONGER THAN A HALF-WAVE ACT AS INDUCTIVE LOADS	1	2	0	0	3
0 928	03-15 DO YOU USE OR REFER TO THE GENERAL RULE THAT ANTENNAS WHICH ARE SHORTER THAN A HALF-WAVE ACT AS CAPACITIVE LOADS	1	1	0	0	3
0 929	03-16 DO YOU WORK WITH HERTZ ANTENNAS	1	2	0	0	3
0 930	03-17 DO YOU WORK WITH MARCONI ANTENNAS	1	2	1	0	3
0 931	03-18 DO YOU WORK WITH BROADSIDE ARRAYS	1	2	0	0	3
0 932	03-19 DO YOU WORK WITH END-FIRE ARRAYS	1	1	0	0	3
0 933	03-20 DO YOU WORK WITH CARDIOID ARRAYS	1	1	0	0	2
0 934	03-21 DO YOU WORK WITH COLLINEAR ARRAYS	1	1	0	0	3
0 935	03-22 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC INDUCTION FIELDS WHEN WORKING WITH ANTENNAS	2	4	0	0	7
0 936	03-23 DO YOU MEASURE ELECTROMAGNETIC INDUCTION FIELDS OF ANTENNAS	1	1	0	0	3
0 937	03-24 DO YOU USE OR REFER TO THE TERM ELECTROMAGNETIC RADIATION FIELDS WHEN WORKING WITH ANTENNAS	2	3	1	1	6
0 938	03-25 DO YOU MEASURE ELECTROMAGNETIC RADIATION FIELDS OF ANTENNAS	1	1	0	0	3
0 939	03-26 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN ANTENNA RADIATION	1	2	0	0	4
0 940	03-27 DO YOU USE OR REFER TO THE TIME PHASE OF ELECTRIC (E) AND MAGNETIC (H) COMPONENTS IN ANTENNA INDUCTION FIELD	1	2	0	0	5
0 941	03-28 ARE ANY OF THE ANTENNAS YOU WORK ON LINEARLY POLARIZED	3	5	1	1	8
0 942	03-29 ARE ANY OF THE ANTENNAS YOU WORK ON CIRCULARLY POLARIZED	2	3	0	1	5
0 943	03-30 DO YOU MEASURE OR DETERMINE THE POLARITY OF ANTENNAS	2	3	0	0	5
0 944	03-31 DO YOU CONSTRUCT, OR MAKE THE CALCULATIONS NECESSARY TO CONSTRUCT, ANTENNAS OF CORRECT LENGTH FOR	1	1	0	0	3

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

TRANSMISSION LINES

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
Q 945 Q3-32 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS	2	2	1	1	3
Q 946 Q3-33 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS SERVING AS DIRECTORS	1	1	1	1	2
Q 947 Q3-34 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN PARASITIC ELEMENTS SERVING AS REFLECTORS	2	2	1	1	3
Q 948 Q3-35 DO THE ANTENNA ARRAYS YOU WORK WITH CONTAIN DON'T REMEMBER WHAT KIND OF ELEMENTS	4	5	3	2	8
Q 949 Q3-36 DO YOU WORK ON UNIDIRECTIONAL ANTENNAS	9	10	6	7	12
Q 950 Q3-37 DO YOU WORK ON BIDIRECTIONAL ANTENNAS	6	6	6	4	9
Q 951 Q3-38 DO YOU WORK ON DON'T REMEMBER THE DIRECTIONALITY	2	2	2	1	4
Q 852 Q3-39 DO YOU WORK WITH ROTAR ANTENNA ARRAYS	2	2	2	2	3
P 953 P1-01 IN YOUR PRESENT JOB DO YOU WORK WITH TRANSMISSION LINES	31	35	26	29	38
P 954 P1-02 DO YOU REFER TO OR USE COPPER LOSS OR I2R LOSS IN TRANSMISSION LINES	2	3	1	2	4
P 955 P1-03 DO YOU REFER TO OR USE SKIN EFFECTS OF HIGH FREQUENCY CURRENTS IN TRANSMISSION LINES	5	6	3	3	7
P 956 P1-04 DO YOU REFER TO OR USE RADIATION LOSS IN TRANSMISSION LINES	7	9	5	5	14
P 957 P1-05 DO YOU USE OR REFER TO DIELECTRIC LOSS IN TRANSMISSION LINES	6	7	3	3	11
P 958 P1-06 DO YOU USE OR REFER TO LEAKAGE LOSSES IN TRANSMISSION LINES	9	11	6	7	15
P 959 P1-07 DO YOU WORK WITH TWISTED PAIR TRANSMISSION LINES	18	20	16	16	24
P 960 P1-08 DO YOU WORK WITH TWIN LEAD TRANSMISSION LINES	12	15	8	9	20
P 961 P1-09 DO YOU WORK WITH OPEN TWO-WIRE TRANSMISSION LINES	15	19	9	12	21
P 962 P1-10 DO YOU WORK WITH FLEXIBLE COAXIAL CABLE TRANSMISSION LINES	20	23	16	17	28
P 963 P1-11 DO YOU WORK WITH RIGID COAXIAL CABLE TRANSMISSION LINES	10	13	6	8	16
P 964 P1-12 DO YOU TROUBLESHOOT TRANSMISSION LINES	29	32	24	26	36
P 965 P1-13 DO YOU ANALYZE VOLTAGE OR CURRENT WAVEFORMS IN TRANSMISSION LINES TO DETERMINE THE TYPE OF TERMINATION	9	10	8	8	14
P 966 P1-14 DO YOU SELECT APPROPRIATE TRANSMISSION LINES TERMINATIONS TO ACHIEVE DESIRED WAVEFORMS	6	7	3	4	9
P 967 P1-15 DO YOU USE OR REFER TO SCHEMATIC SYMBOLS FOR LINE TERMINATIONS IN TERMS OF CIRCUIT TERMINATIONS	9	10	8	6	11
P 968 P1-16 DO YOU MEASURE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES	2	3	1	1	5
P 969 P1-17 DO YOU CALCULATE STANDING WAVE RATIOS (SWR) OF TRANSMISSION LINES	2	2	1	1	4
P 970 P1-18 DO YOU PERFORM THE CALCULATIONS NECESSARY TO DETERMINE THE IMPEDANCE AND LENGTH OF QUARTER - WAVELENGTH	3	3	3	3	4

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
P 971 P1-19 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING MATCHING TRANSFORMERS	11	11	11	10	13
P 972 P1-20 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING DELTA MATCHING	2	3	0	1	4
P 973 P1-21 DO YOU SELECT THE TYPE OF TRANSMISSION LINE NEEDED FOR PARTICULAR JOBS WITHOUT REFERRING TO TECHNICAL DATA	6	6	6	5	10
P 974 P1-22 DO YOU USE OR REFER TO THE TERM CHARACTERISTIC IMPEDANCE (Z0) OF TRANSMISSION LINES	9	9	10	9	11
P 975 P1-23 DO YOU CALCULATE THE CHARACTERISTIC IMPEDANCE (Z0) OF TRANSMISSION LINES	6	6	6	6	7
P 976 P1-24 DO YOU USE OR REFER TO THE TERM CUTOFF FREQUENCY OF TRANSMISSION LINES	5	6	5	5	7
P 977 P1-25 DO YOU USE OR REFER TO THE TERM VELOCITY FACTOR (K) OF TRANSMISSION LINES	1	2	0	1	3
P 978 P1-26 DO YOU COMPUTE THE ELECTRICAL LENGTH OF TRANSMISSION LINES FOR PARTICULAR FREQUENCIES	2	3	2	2	4
P 979 P1-27 DO YOU CONSTRUCT TRANSMISSION LINES OF PARTICULAR ELECTRICAL LENGTH FOR GIVEN FREQUENCIES	1	2	0	0	3
P 980 P1-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT AS THE FREQUENCY INCREASES AND THE PHYSICAL LENGTH OF	2	2	2	1	3
P 981 P1-29 DO YOU WORK WITH NONRESONANT (FLAT) TRANSMISSION LINES	9	10	8	9	11
P 982 P1-30 DO YOU WORK WITH RESONANT TRANSMISSION LINES	7	8	7	6	11
P 983 P1-31 DO YOU WORK WITH TRANSMISSION LINES WHICH ARE MATCHED TO LOADS USING STUB MATCHING	2	2	2	2	3
P 984 P2-71 DO YOU WORK WITH WAVEGUIDES OR CAVITY RESONATORS IN YOUR PRESENT JOB	4	4	4	3	7

WAVEGUIDES AND CAVITY RESONATORS

BY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
P 985 P2-02 DO YOU INSPECT WAVEGUIDES OR CAVITY RESONATORS	1	1	0	0	3
P 986 P2-03 DO YOU CLEAN WAVEGUIDES OR CAVITY RESONATORS	3	0	0	0	3
P 987 P2-04 DO YOU BEND WAVEGUIDES OR CAVITY RESONATORS	0	0	0	0	1
P 988 P2-05 DO YOU TWIST WAVEGUIDES OR CAVITY RESONATORS	0	0	0	0	1
P 989 P2-06 DO YOU PRESSURIZE WAVEGUIDES OR CAVITY RESONATORS	0	1	0	0	2
P 990 P2-07 DO YOU PURGE WAVEGUIDES OR CAVITY RESONATORS	1	0	0	0	2
P 991 P2-08 DO YOU TROUBLESHOOT WAVEGUIDES OR CAVITY RESONATORS	1	2	0	0	3
P 992 P2-09 DO YOU REMOVE OR INSTALL COMPLETE WAVEGUIDES	0	1	0	0	2
P 993 P2-10 DO YOU REMOVE OR INSTALL WAVEGUIDE SECTIONS	1	1	0	0	2
P 994 P2-11 DO YOU REMOVE OR INSTALL DUMMY LOADS	1	1	0	0	2
P 995 P2-12 DO YOU REMOVE OR INSTALL E BENDS	0	1	0	0	1
P 996 P2-13 DO YOU REMOVE OR INSTALL H BENDS	0	1	0	0	1
P 997 P2-14 DO YOU REMOVE OR INSTALL OTHER BENDS	1	1	0	0	1
P 998 P2-15 DO YOU REMOVE OR INSTALL CHOKE JOINTS	0	1	0	0	1
P 999 P2-16 DO YOU REMOVE OR INSTALL ROTATING JOINTS	0	1	0	0	1
P1000 P2-17 DO YOU REMOVE OR INSTALL DIRECTIONAL COUPLERS	1	1	0	0	2
P1001 P2-18 DO YOU REMOVE OR INSTALL BIDIRECTIONAL COUPLERS	1	1	0	0	2
P1002 P2-19 DO YOU USE OR REFER TO THE WALL OF WAVEGUIDES	1	1	0	0	3

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL DO1	SPL DO2	SPL DO3	SPL DO4	SPL DO5
P1003 P2-20 DO YOU USE OR REFER TO "B" WALL OF WAVEGUIDES	1	1	0	0	3
P1004 P2-21 DO YOU USE OR REFER TO CUTOFF FREQUENCY OF WAVEGUIDES	1	2	0	0	3
P1005 P2-22 DO YOU USE OR REFER TO FREQUENCY-DETERMINING WALL OF WAVEGUIDES	1	2	0	0	3
P1006 P2-23 DO YOU USE OR REFER TO POWER-DETERMINING WALL OF WAVEGUIDES	1	1	0	0	3
P1007 P2-24 DO YOU USE OR REFER TO ELECTRIC FIELD BOUNDARY CONDITIONS	1	2	0	0	3
P1008 P2-25 DO YOU USE OR REFER TO MAGNETIC FIELD BOUNDARY CONDITIONS	1	2	0	0	3
P1009 P2-26 DO YOU USE OR REFER TO DUPLEXER FIELD BOUNDARY CONDITIONS	1	2	0	0	3
P1010 P2-27 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST WAVEGUIDES ARE MADE WITH A "B" WALL SIZE OF .7 WAVELENGTHS	1	1	0	0	2
P1011 P2-28 DO YOU USE OR REFER TO THE GENERAL RULE THAT MOST "A" WALLS RANGE FROM .2 TO .5 WAVELENGTHS IN SIZE, WITH .35	0	1	0	0	1
P1012 P2-29 ARE YOU CONCERNED WITH THE MATERIAL (SUCH AS BRASS) WHICH WAVEGUIDES ARE MADE OF	1	1	0	0	3
P1013 P2-30 DO YOU COMPUTE THE LENGTH OF A WAVEGUIDE FOR SPECIFIC INSTALLATION	0	1	0	0	1
P1014 P2-31 DO YOU USE THE RIGHT HAND RULE TO DETERMINE THE DIRECTION OF PROPAGATION, DIRECTION OF "E" FIELD, OR	1	1	0	0	3
P1015 P2-32 DO YOU USE OR REFER TO THE TIME PHASE OF PEAK "E" OR "H" LINES IN WAVEGUIDES	1	1	0	0	3
P1016 P2-33 DO YOU MEASURE THE TIME PHASE OF "E" OR "H" LINES IN WAVEGUIDES	0	1	0	0	1
P1017 P2-39 DO YOU USE OR REFER TO THE SPACE QUADRATURE OF "E" OR "H" LINES IN WAVEGUIDES	0	1	0	0	1
P1018 P2-35 ARE HIGH POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	1
P1019 P2-36 ARE LOW POWER PROBES USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	1
P1020 P2-37 ARE LOOPS USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	1
P1021 P2-38 ARE APERTURES (WINDOWS OR IRISES) USED ON WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	1	2	0	0	3
P1022 P2-39 ARE DON'T REMEMBER THE KIND OF ENERGY COUPLING USED O. AVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	1	1	0	0	0
P1023 P2-40 DO YOU DETERMINE WHERE PROBES SHOULD BE MOUNTED IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO	0	0	0	0	1
P1024 P2-41 DO YOU DETERMINE THE POSITIONING OF LOOPS IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO	0	0	0	0	1

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PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
P1025 P2-2 DO YOU DETERMINE THE POSITIONING OR SIZE OF APERTURES IN WAVEGUIDES OR CAVITY RESONATORS WITHOUT REFERRING TO	0	1	0	0	1
P1026 P2-3 ARE CHOKE JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	1	1	0	0	1
P1027 P2-4 ARE ROTATING JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	0	0	0	0	1
P1028 P2-5 ARE DON'T REMEMBER THE KIND OF JOINTS USED IN WAVEGUIDES OR CAVITY RESONATORS YOU WORK WITH	1	1	0	0	3
P1029 P2-6 DO YOU TUNE CAVITY RESONATORS USING CAPACITIVE TUNING	0	1	0	0	1
P1030 P2-7 DO YOU TUNE CAVITY RESONATORS USING INDUCTIVE TUNING	0	1	0	0	1
P1031 P2-8 DO YOU TUNE CAVITY RESONATORS USING VOLUME TUNING	0	1	0	0	1
P1032 P2-9 DO YOU TUNE CAVITY RESONATORS USING DON'T REMEMBER	1	1	0	0	2
P1033 P2-10 DO YOU MEASURE THE FREQUENCY OF SIGNALS IN CAVITY RESONATORS	1	1	0	0	2
THE METHOD OF TUNING					
P1034 P3-01 IN YOUR PRESENT JOB DO YOU WORK WITH KLYSTRONS, TRAVELING WAVE TUBES (TWT), PARAMETRIC AMPLIFIERS, OR	4	5	3	3	7
MICROWAVE AMPLIFIERS AND OSCILLATORS					
P1035 P3-02 DO YOU USE OR REFER TO INTERELECTRODE CAPACITANCE	1	2	0	0	3
P1036 P3-03 DO YOU USE OR REFER TO ELECTRON TRANSIT TIME	1	1	0	0	3
P1037 P3-04 DO YOU USE OR REFER TO LEAD INDUCTANCE	1	2	0	0	3
P1038 P3-05 DO YOU USE OR REFER TO RF LOSSES IN EXTERNAL CIRCUITRY	1	2	0	0	3
P1039 P3-06 DO YOU USE OR REFER TO PRINCIPLE OF ELECTRON VELOCITY MODULATION	1	2	0	0	4
P1040 P3-07 DO YOU USE OR REFER TO ELECTRON BUNCHING	1	1	0	0	3
P1041 P3-08 DO YOU WORK WITH TWO-CAVITY KLYSTRONS	1	2	0	0	4
P1042 P3-09 DO YOU WORK WITH THREE-CAVITY KLYSTRONS	1	2	0	0	3
P1043 P3-10 DO YOU WORK WITH REFLEX KLYSTRONS	2	4	0	1	7
P1044 P3-11 DO YOU WORK WITH TRAVELING-WAVE TUBES (TWT)	2	1	1	0	5
P1045 P3-12 DO YOU WORK WITH NONDEGENERATIVE PARAMETRIC AMPLIFIERS	1	1	0	0	3
P1046 P3-13 DO YOU WORK WITH UP-CONVERTER PARAMETRIC AMPLIFIERS	2	1	0	1	3
P1047 P3-14 DO YOU WORK WITH MAGNETRONS	1	1	0	0	3
P1048 P3-15 DO YOU INSPECT KLYSTRONS OR TWT	2	2	0	0	2
P1049 P3-16 DO YOU CLEAN KLYSTRONS OR TWT	1	1	0	0	3
P1050 P3-17 DO YOU TUNE KLYSTRONS OR TWT ELECTRICALLY	0	1	0	0	1
P1051 P3-18 DO YOU TUNE KLYSTRONS OR TWT MECHANICALLY	1	1	0	0	3
P1052 P3-19 DO YOU PERFORM OPERATIONAL CHECKS OF KLYSTRONS OR TWT	1	2	0	0	3
P1053 P3-20 DO YOU TROUBLESHOOT KLYSTRONS OR TWT	1	2	0	0	4
P1054 P3-21 DO YOU REMOVE OR REPLACE COMPLETE KLYSTRON OR TWT	1	1	0	0	2
P1055 P3-22 DO YOU REMOVE OR REPLACE KLYSTRON OR TWT COMPONENTS	1	1	0	0	2
P1056 P3-23 DO YOU INSPECT PARAMETRIC AMPLIFIERS	1	2	0	0	3
P1057 P3-24 DO YOU CLEAN PARAMETRIC AMPLIFIERS	1	1	0	0	3
P1058 P3-25 DO YOU ADJUST PARAMETRIC AMPLIFIERS	1	2	0	0	3

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
P1059 23-26 DO YOU TUNE PARAMETRIC AMPLIFIERS	1	2	0	0	3
P1060 23-27 DO YOU PERFORM OPERATIONAL CHECKS OF PARAMETRIC AMPLIFIERS	1	2	0	0	3
P1061 23-28 DO YOU TROUBLESHOOT PARAMETRIC AMPLIFIERS	1	2	0	0	3
P1062 23-29 DO YOU REMOVE OR REPLACE COMPLETE PARAMETRIC AMPLIFIER	1	1	0	0	2
P1063 23-30 DO YOU REMOVE OR REPLACE PARAMETRIC AMPLIFIER COMPONENTS	1	1	0	0	2
P1064 23-31 DO YOU INSPECT MAGNETRONS	1	1	0	0	2
P1065 23-32 DO YOU CLEAN MAGNETRONS	0	1	0	0	1
P1066 23-33 DO YOU ADJUST MAGNETRONS	1	1	0	0	2
P1067 23-34 DO YOU TUNE MAGNETRONS	1	1	0	0	2
P1068 23-35 DO YOU PERFORM OPERATIONAL CHECKS OF MAGNETRONS	1	1	0	0	2
P1069 23-36 DO YOU TROUBLESHOOT MAGNETRONS	1	1	0	0	2
P1070 23-37 DO YOU REMOVE OR REPLACE COMPLETE MAGNETRON	0	1	0	0	1
P1071 23-38 DO YOU REMOVE OR REPLACE MAGNETRON COMPONENTS	0	1	0	0	1
P1072 23-39 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF	1	1	0	0	2
P1073 23-40 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS COLLECTOR PLATES	1	1	0	0	2
P1074 23-41 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATCHER CAVITIES	1	1	0	0	2
P1075 23-42 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATCHER GRIDS	0	1	0	0	1
P1076 23-43 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS FEEDBACK LOOPS	0	0	0	0	1
P1077 23-44 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS DRIFT SPACES	0	0	0	0	1
P1078 23-45 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS BUNCHER GRIDS	0	0	0	0	1
P1079 23-46 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS BUNCHER CAVITIES	1	1	0	0	3
P1080 23-47 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CONTROL GRIDS	1	1	0	0	2
P1081 23-48 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TWO-CAVITY KLYSTRONS CATHODES	1	1	0	0	3
P1082 23-49 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON REPELLER (REFLECTOR) PLATES	1	2	0	0	3
P1083 23-50 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRIDS	1	1	0	0	2
P1084 23-51 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON GRID CAVITY GAPS	1	2	0	0	3
P1085 23-52 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON RESONANT CAVITIES	1	1	0	0	2
P1086 23-53 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON MAGNETIC COUPLING LOOPS	1	1	0	0	3
P1087 23-54 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON FILAMENTS	1	2	0	0	3
REFLEX KLYSTRON CATHODES					

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TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
P1088 P3-55 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF REFLEX KLYSTRON OUTPUT LEADS	1	1	0	0	2
P1089 P3-56 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES FILAMENTS	1	2	0	0	3
P1090 P3-57 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES CATHODES	1	1	0	0	3
P1091 P3-58 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES MODULATOR GRIDS	1	1	0	0	2
P1092 P3-59 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES ANODES	1	2	0	0	3
P1093 P3-60 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES HELIXES	1	1	0	0	3
P1094 P3-61 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES COLLECTORS	1	2	0	0	3
P1095 P3-62 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES MAGNETS	1	1	0	0	3
P1096 P3-63 DO YOU USE OR REFER TO THE OPERATING PRINCIPLES OF TRAVELING-WAVE TUBES ATTENUATORS	1	2	0	0	5
P1097 P3-64 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE CIRCULATORS	0	1	0	0	1
P1098 P3-65 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER SIGNAL CAVITIES	1	1	0	0	2
P1099 P3-66 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER IDLER CAVITIES	0	1	0	0	1
P1100 P3-67 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER VARACTOR DIODES	1	1	0	0	3
P1101 P3-68 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER FERRITE ISOLATORS	0	1	0	0	0
P1102 P3-69 DO YOU PERFORM TASKS ON PARAMETRIC AMPLIFIER REVERSE- BIAS BATTERIES	1	1	0	0	3
P1103 P3-70 DO YOU PERFORM TASKS ON ANODES	0	1	0	0	1
P1104 P3-71 DO YOU PERFORM TASKS ON ANODE COOLING PINS	0	0	0	0	1
P1105 P3-72 DO YOU PERFORM TASKS ON COUPLING LOOPS	0	0	0	0	1
P1106 P3-73 DO YOU PERFORM TASKS ON HEATER LEADS	0	1	0	0	1
P1107 P3-74 DO YOU PERFORM TASKS ON RESONANT CAVITIES	0	1	0	0	1
P1108 P3-75 DO YOU PERFORM TASKS ON CATHODES	0	1	0	0	1
P1109 P3-76 DO YOU PERFORM TASKS ON MAGNETS	0	1	0	0	1
Q1110 Q1-01 DO YOU USE OR REFER TO STORAGE REGISTERS	2	3	1	1	5
Q1111 Q1-02 DO YOU USE OR REFER TO SHIFT REGISTERS	1	2	1	1	2
Q1112 Q1-03 DO YOU USE OR REFER TO LOGIC SYMBOLS OF SHIFT REGISTERS	1	1	0	0	2
Q1113 Q1-04 DO YOU USE OR REFER TO LOGIC SYMBOLS OF STORAGE REGISTERS	1	1	0	0	2
Q1114 Q1-05 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF SHIFT REGISTERS	0	1	0	0	0
Q1115 Q1-06 DO YOU TRACE THE DATA FLOW THROUGH LOGIC DIAGRAMS OF OTHER TYPE OF REGISTERS	1	1	0	1	1

REGISTERS

PCT MBRS RESPONDING (YES) BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

Dy-Tsk	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
Q1116 Q1-07 DO YOU DETERMINE THE STATE OF EACH FLIP-FLOP OF A SHIFT REGISTER AFTER A SPECIFIED NUMBER OF SHIFT PULSES	1	1	0	0	2
Q1117 Q2-01 DO YOU WORK WITH DIGITAL COUNTERS, REGISTERS, OR STORAGE DEVICES IN YOUR PRESENT JOB — STORAGE DEVICES	16	15	16	13	21
Q1118 Q2-02 DO YOU USE OR REFER TO DELAY LINES	2	2	2	2	3
Q1119 Q2-03 DO YOU USE OR REFER TO MAGNETIC CORES	5	6	3	4	7
Q1120 Q2-04 DO YOU USE OR REFER TO MAGNETIC DRUMS	7	9	5	6	12
Q1121 Q2-05 DO YOU USE OR REFER TO MAGNETIC TAPES	8	9	6	6	13
Q1122 Q2-06 DO YOU USE OR REFER TO ACCESS TIME OR SPEED OR	5	7	3	3	9
Q1123 Q2-07 DO YOU USE OR REFER TO WORD CAPACITY OF MEMORY — MEMORY SYSTEMS	5	7	3	3	11
Q1124 Q2-08 DO YOU USE OR REFER TO VOLATILITY OF MEMORY SYSTEMS SYSTEMS	2	2	1	1	5
Q1125 Q2-09 DO YOU USE OR REFER TO LOGIC SYMBOL OF DELAY LINES	1	0	0	0	2
Q1126 Q3-01 IN YOUR PRESENT JOB, DO YOU WORK WITH DIGITAL-TO- ANALOG (D/A) CONVERTERS, ANALOG-TO-DIGITAL (A/D)	17	22	12	13	28
Q1127 Q3-02 DO YOU COMPUTE OUTPUT VOLTAGES FOR ELECTROMECHANICAL DIGITAL-TO-ANALOG (D/A) CONVERTERS FOR GIVEN INPUT — DIGITAL TO ANALOG CONVERTERS	2	3	0	1	4
Q1128 Q3-03 DO YOU USE OR REFER TO THE GENERAL RULE THAT THE COUNT IN ELECTROMECHANICAL DIGITAL-TO-ANALOG (D/A)	1	2	0	0	3
Q1129 Q3-04 DO YOU COMPUTE ANALOG VOLTAGES FOR GIVEN BINARY COUNTS IN ELECTRONIC DIGITAL-TO-ANALOG (D/A) CONVERTERS	1	2	0	1	3
Q1130 Q3-05 DO YOU PERFORM SAMPLE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	1	2	1	1	3
Q1131 Q3-06 DO YOU PERFORM HOLD FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	1	1	0	0	3
Q1132 Q3-07 DO YOU PERFORM COMPARE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	1	1	0	0	3
Q1133 Q3-08 DO YOU PERFORM DIGITIZE FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER CIRCUITS	1	1	0	0	3
Q1134 Q3-09 DO YOU PERFORM DON'T REMEMBER WHICH FUNCTION TASKS ON VARIABLE TIME ANALOG-TO-DIGITAL (A/D) CONVERTER	3	4	1	2	5
Q1135 Q3-10 DO YOU USE OR REFER TO SAMPLE FUNCTION OF A/D CONVERTERS	2	2	1	1	4
Q1136 Q3-11 DO YOU USE OR REFER TO HOLD FUNCTION OF A/D CONVERTERS	1	1	0	0	3
Q1137 Q3-12 DO YOU USE OR REFER TO COMPARE FUNCTION OF A/D CONVERTERS	1	2	0	1	3
Q1138 Q3-13 DO YOU USE OR REFER TO DIGITAL FUNCTION OF A/D CONVERTERS	1	2	1	1	3
Q1139 Q3-14 DO YOU PERFORM ANY TASKS ON MECHANICAL ANALOG-TO- DIGITAL (A/D) CONVERTERS	3	4	1	2	5

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-ISK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005	
R1140 S1-01 DO YOU WORK WITH PHANTASTRON CIRCUITRY IN YOUR PRESENT JOB	0	0	0	0	1	PHANTASTRONS
R1141 R2-01 IN YOUR PRESENT JOB DO YOU WORK WITH SCHMITT TRIGGER CIRCUITS	1	2	0	0	3	
R1142 R2-02 DO YOU TRACE DATA FLOW THROUGH SCHMITT TRIGGER SCHEMATIC DIAGRAMS	1	1	0	0	2	SCHMITT TRIGGERS
R1143 R2-03 DO YOU USE OR REFER TO SCHMITT TRIGGER LOGIC SYMBOLS	1	1	0	0	1	
R1144 R3-01 IN YOUR PRESENT JOB DO YOU FABRICATE MULTICONDUCTOR CABLES	3	4	1	1	7	
R1145 R3-02 DO YOU FABRICATE COAXIAL CABLES	2	2	1	1	4	CABLE FABRICATION
S1146 S1-01 IN YOUR PRESENT JOB DO YOU PERFORM ANY TASKS ON VISUAL READOUT SYSTEMS	20	22	17	17	27	
S1147 S1-02 DO YOU PERFORM ANY TASKS ON NIXIE LIGHTS OR NIXIE LIGHT DECODER SYSTEMS	6	6	7	5	11	INPUT/OUTPUT DEVICES
S1148 S1-03 DO YOU ANALYZE NIXIE LIGHT DECODER SYSTEMS USING BOOLEAN ALGEBRA	1	1	0	0	2	
S1149 S2-01 DO YOU WORK WITH PHOTO TUBES IN YOUR PRESENT JOB	0	2	0	0	1	PHOTO SENSITIVE DEVICES
S1150 S3-01 IN YOUR PRESENT JOB DO YOU WORK WITH CHOPPER CIRCUITS	0	1	0	0	1	
S1151 S3-02 DO YOU MEASURE EXCITATION FREQUENCIES	0	1	0	0	1	
S1152 S3-03 DO YOU MEASURE VOLTAGE-CURRENT PHASE RELATIONSHIPS	0	0	0	0	1	
S1153 S3-04 DO YOU USE OR REFER TO EXCITATION FREQUENCIES	0	1	0	0	1	SYNCHRONOUS VIBRATIONS (CHOPPER CIRCUITS)
S1154 S3-05 DO YOU USE OR REFER TO VOLTAGE-CURRENT PHASE RELATIONSHIPS	1	1	0	0	2	
S1155 S3-06 DO YOU USE SERVOS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	1	1	0	0	1	
S1156 S3-07 DO YOU USE DETECTORS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	1	1	0	0	1	
S1157 S3-08 DO YOU USE ERROR SIGNAL DEVICES IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	1	2	0	1	2	
S1158 S3-09 DO YOU USE COMPARISON CIRCUITS IN CONJUNCTION WITH CHOPPER CIRCUIT OPERATION	1	1	0	0	2	
T1159 T1-01 DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH INFRARED SYSTEMS	0	0	0	0	0	
T1160 T1-02 DO YOU INSPECT INFRARED SYSTEMS	0	0	0	0	0	
T1161 T1-03 DO YOU CLEAN INFRARED SYSTEMS	0	0	0	0	0	
T1162 T1-04 DO YOU ADJUST OR CALIBRATE INFRARED SYSTEMS	0	0	0	0	0	INFRARED
T1163 T1-05 DO YOU OPERATE INFRARED SYSTEMS	0	0	0	0	0	
T1164 T1-06 DO YOU TROUBLESHOOT WIRE CONNECTIONS OF INFRARED SYSTEMS	0	0	0	0	0	
T1165 T1-07 DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF INFRARED SYSTEMS	0	0	0	0	0	
T1166 T1-08 DO YOU TROUBLESHOOT DOWN TO INFRARED SYSTEM COMPONENT PARTS	0	0	0	0	0	
T1167 T1-09 DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF INFRARED SYSTEMS	0	0	0	0	0	
T1168 T1-10 DO YOU REMOVE OR REPLACE INFRARED SYSTEM COMPONENT PARTS	0	0	0	0	0	

AF HUMAN RESOURCES LABORATORY
AIR FORCE SYSTEMS COMMAND

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

QY-TSK			SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
T1169	T1-11	DO YOU USE OR REFER TO FAR REGION	0	0	0	0	0
T1170	T1-12	DO YOU USE OR REFER TO INTERMEDIATE REGION	0	0	0	0	0
T1171	T1-13	DO YOU USE OR REFER TO NEAR REGION	0	0	0	0	0
T1172	T1-14	DO YOU USE OR REFER TO MICRON	0	0	0	0	0
T1173	T1-15	DO YOU USE OR REFER TO GRAY BODIES	0	0	0	0	0
T1174	T1-16	DO YOU USE OR REFER TO BLACK BODIES	0	0	0	0	0
T1175	T1-17	DO YOU USE OR REFER TO ABSORPTION	0	0	0	0	0
T1176	T1-18	DO YOU USE OR REFER TO SCATTERING	0	0	0	0	0
T1177	T1-19	DO YOU USE OR REFER TO ABSOLUTE ZERO	0	0	0	0	0
T1178	T1-20	DO YOU PERFORM TASKS ON BLITZ	0	0	0	0	0
T1179	T1-21	DO YOU PERFORM TASKS ON TARGET BUTTONS	0	0	0	0	0
T1180	T1-22	DO YOU PERFORM TASKS ON ERECTOR LENSES	0	0	0	0	0
T1181	T1-23	DO YOU PERFORM TASKS ON OCULAR LENSES	0	0	0	0	0
T1182	T1-24	DO YOU PERFORM TASKS ON CORRECTION LENSES	0	0	0	0	0
T1183	T1-25	DO YOU PERFORM TASKS ON FILTERS	0	0	0	0	0
T1184	T1-26	DO YOU PERFORM TASKS ON SPHERICAL MIRRORS	0	0	0	0	0
T1185	T1-27	DO YOU PERFORM TASKS ON PLANE MIRRORS	0	0	0	0	0
T1186	T2-01	DOES YOUR PRESENT JOB INVOLVE ANY TASKS DEALING WITH LASERS	0	0	0	0	1

LASERS

QY-TSK			SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
T1187	T2-02	DO YOU INSPECT LASER SYSTEMS	0	0	0	0	0
T1188	T2-03	DO YOU CLEAN LASER SYSTEMS	0	0	0	0	0
T1189	T2-04	DO YOU OPERATE LASER SYSTEMS	0	0	0	0	0
T1190	T2-05	DO YOU OPERATE LASER SYSTEMS	0	0	0	0	0
T1191	T2-06	DO YOU TROUBLESHOOT WIRE CONNECTIONS OF LASER SYSTEMS	0	0	0	0	0
T1192	T2-07	DO YOU TROUBLESHOOT MAJOR ASSEMBLIES OF LASER SYSTEMS	0	0	0	0	0
T1193	T2-08	DO YOU TROUBLESHOOT TO COMPONENT PARTS OF LASER SYSTEMS	0	0	0	0	0
T1194	T2-09	DO YOU REMOVE OR REPLACE MAJOR ASSEMBLIES OF LASER SYSTEMS	0	0	0	0	0
T1195	T2-10	DO YOU REMOVE OR REPLACE COMPONENT PARTS OF LASER SYSTEMS	0	0	0	0	0
T1196	T2-11	DO YOU USE OR REFER TO ANGSTROMS (A)	0	0	0	0	0
T1197	T2-12	DO YOU USE OR REFER TO ELECTRON ENERGY LEVELS	0	0	0	0	0
T1198	T2-13	DO YOU USE OR REFER TO GROUND STATE	0	0	0	0	0
T1199	T2-14	DO YOU USE OR REFER TO EXCITED STATE	0	0	0	0	0
T1200	T2-15	DO YOU USE OR REFER TO PACKET OF RADIATION	0	0	0	0	0
T1201	T2-16	DO YOU USE OR REFER TO PHOTONS	0	0	0	0	0
T1202	T2-17	DO YOU USE OR REFER TO SPONTANEOUS EMISSION	0	0	0	0	0
T1203	T2-18	DO YOU USE OR REFER TO STIMULATED EMISSION	0	0	0	0	0
T1204	T2-19	DO YOU USE OR REFER TO COHERENCE OR INCOHERENCE	0	0	0	0	0
T1205	T2-20	DO YOU USE OR REFER TO INVERSION LEVEL	0	0	0	0	0
T1206	T2-21	DO YOU USE OR REFER TO MONOCHROMATIC	0	0	0	0	0
T1207	T2-22	DO YOU WORK WITH ACTIVE MATERIALS	0	0	0	0	0
T1208	T2-23	DO YOU WORK WITH PUMPING SOURCES	0	0	0	0	0
T1209	T2-24	DO YOU WORK WITH FULL SILVERED (100% REFLECTIVE) MIRRORS	0	0	0	0	0

PCT MBRS RESPONDING 'YES' BY SELECTED GRPS

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
T1210 T2-25 DO YOU WORK WITH HALF SILVERED (92% REFLECTIVE) MIRRORS	0	0	0	0	0
T1211 T2-26 DO YOU WORK WITH HELICAL FLASHTUBES	0	0	0	0	0
T1212 T2-27 DO YOU WORK WITH RUBY	0	0	0	0	0
T1213 T2-28 DO YOU WORK WITH HELIUM-NEON	0	0	0	0	0
T1214 T2-29 DO YOU WORK WITH HELIUM-XENON	0	0	0	0	0
T1215 T2-30 DO YOU WORK WITH XENON	0	0	0	0	0
T1216 T2-31 DO YOU WORK WITH CESIUM-HELIUM	0	0	0	0	0
T1217 T2-32 DO YOU WORK WITH ARGON	0	0	0	0	0
T1218 T2-33 DO YOU WORK WITH NEODYMIUM IN GLASS	0	0	0	0	0
T1219 T2-34 DO YOU WORK WITH GALLIUM ARSENIDE	0	1	0	0	0
T1220 T3-01 IN YOUR PRESENT JOB DO YOU WORK WITH DISPLAY TUBES, SUCH AS DIRECT VIEW STORAGE (DVST) OR MULTIPLE MODE DISPLAY TUBES	1	1	0	0	3
T1221 T3-02 DO YOU INSPECT DVST OR MMST	0	0	0	0	0
T1222 T3-03 DO YOU CLEAN DVST OR MMST	0	0	0	0	0
T1223 T3-04 DO YOU ADJUST OR CALIBRATE DVST OR MMST	1	1	0	0	2
T1224 T3-05 DO YOU OPERATE SYSTEMS THAT CONTAIN DVST OR MMST	0	1	0	0	2
T1225 T3-06 DO YOU TROUBLESHOOT DVST OR MMST	0	0	0	0	0
CIRCUITS					
T1226 T3-07 DO YOU REMOVE OR REPLACE DVST OR MMST TUBES FROM MAJOR ASSEMBLIES OR UNITS	0	0	0	0	0
T1227 T3-08 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO NAME THE VARIOUS ELEMENTS OF DVST	0	0	0	0	0
T1228 T3-09 DO YOU PERFORM TASKS THAT MAKE IT NECESSARY TO NAME THE VARIOUS ELEMENTS OF MMST	0	0	0	0	0
T1229 T3-10 DO YOU PERFORM TASKS ON FLOOD GUNS	0	0	0	0	0
T1230 T3-11 DO YOU PERFORM TASKS ON WRITE GUNS	0	0	0	0	0
T1231 T3-12 DO YOU PERFORM TASKS ON ATTACK GUNS	0	0	0	0	0
T1232 T3-13 DO YOU PERFORM TASKS ON ERASE GUNS	0	0	0	0	0
T1233 T3-14 DO YOU PERFORM TASKS ON STORAGE GRIDS	0	0	0	0	0
U1234 U1-01 IN YOUR PRESENT JOB, DO YOU PERFORM ANY PROGRAMMING	4	6	1	3	4
TASKS					
U1235 U1-02 DO YOU USE OR REFER TO DECIMAL SYSTEMS	2	2	0	1	2
U1236 U1-03 DO YOU USE OR REFER TO PROGRAMS	3	4	1	3	3
U1237 U1-04 DO YOU USE OR REFER TO HEXADECIMAL SYSTEMS PROGRAMMING	1	1	0	0	1
U1238 U1-05 DO YOU USE OR REFER TO 8-4-2-1 SYSTEMS	1	1	0	0	2
U1239 U1-06 DO YOU USE OR REFER TO FOUR SYSTEMS	0	1	0	0	1
U1240 U1-07 DO YOU USE OR REFER TO BINARY SYSTEMS	3	5	1	3	3
U1241 U1-08 DO YOU USE OR REFER TO TIME-SHARING	1	2	0	1	2
U1242 U1-09 DO YOU USE OR REFER TO DATA WORDS	3	4	1	2	3
U1243 U1-10 DO YOU USE OR REFER TO ADDRESS WORDS	2	3	1	2	3
U1244 U1-11 DO YOU USE OR REFER TO ADDRESS/SUBADDRESS	2	2	0	1	3
U1245 U1-12 DO YOU USE OR REFER TO STEERING/INFORMATION	1	1	0	0	2
U1246 U1-13 DO YOU USE OR REFER TO INFORMATION WORDS	2	3	1	2	3
U1247 U1-14 DO YOU PERFORM TASKS ON SINGLE LEVEL PROGRAMMING	2	3	0	1	2
U1248 U1-15 DO YOU PERFORM TASKS ON MULTI-LEVEL PROGRAMMING	1	2	0	1	1

TASK GROUP SUMMARY
PERCENT MEMBERS PERFORMING

DY-TSK	SPL 001	SPL 002	SPL 003	SPL 004	SPL 005
U1249 U1-16 DO YOU PERFORM TASKS ON INPUT DEVICES	1	1	0	1	2
U1250 U1-17 DO YOU PERFORM TASKS ON STORAGE DEVICES	1	1	0	1	2
U1251 U1-18 DO YOU PERFORM TASKS ON ARITHMETIC SECTIONS	0	0	0	0	1
U1252 U1-19 DO YOU PERFORM TASKS ON CONTROL SECTIONS	1	2	0	1	3
U1253 U1-20 DO YOU PERFORM TASKS ON OUTPUT DEVICES	1	1	0	1	1
U1254 U1-21 DO YOU PERFORM TASKS ON POWER SUPPLIES	1	0	0	0	1
U1255 U2-01 DO YOU USE DECIBELS TO EXPRESS AMPLIFICATION AND ATTENUATION	74	72	76	72	80
U1256 U2-02 DO YOU USE LOGARITHMS TO COMPUTE OUTPUT POWER IN DECIBELS	31	22	43	33	28
U1257 V2-03 DO YOU USE LOGARITHMS TO COMPUTE ATTENUATION IN DECIBELS	30	23	39	31	28
U1258 V2-04 DUMMY TASK TO IDENTIFY INCUMBENTS WHO PERFORMED NO TASKS	3	2	3	3	2

DB AND POWER RATIOS

SUPPLEMENTARY

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

This report summarizes the results of the administration of the Electronic Principles Inventory to airmen assigned to Telecommunications Systems Control Specialty (AFSC 307X). The report gives a detailed listing of the technical tasks and knowledge needed to perform the jobs within the specialty or career ladder. CONTINUED

This specialty has the following functions:

Superintends telecommunications systems technical operations and control facilities. Plans and organizes telecommunications systems control activities. Directs technical telecommunications systems control activities. Establishes and conducts on-the-job training for telecommunications systems control personnel. Inspects and evaluates telecommunications systems control activities.